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**Why We Need LPAM**

Fred Baumgartner makes the case for AM community radio.

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# Radio World



\$2.50

The Newspaper for Radio Managers and Engineers

December 17, 2003

**INSIDE**

**NEWS & ENGINEERING**

▼ Handling excessive heat; Robert Lambert remembered; and RDS gets its groove back. **Inside**



**GM JOURNAL**

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▼ Eddie Fritts says deregulation has indeed benefited listeners.



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**GET CONNECTED**

▼ RAM and Radio World fire off a studio routing switcher to a lucky reader.



Page 4

**NEWS ANALYSIS**

## Will Mt. Wilson Stations Pay?

by Randy J. Stine

**LOS ANGELES** Broadcasters may become more enthusiastic about complying with radiofrequency radiation exposure limits now that it appears the RFR safety issue is moving up on the FCC's enforcement priority list.

The commission's Notice of Apparent Liability for Forfeiture against four licensees for RFR violations at the Mt. Wilson antenna farm near Los Angeles could lead to other high-profile inspections, particularly at mountaintop multi-site, observers believe.

The commission leveled \$10,000 forfeitures against each of the stations for violating the maximum permissible expo-

sure limits of radiofrequency radiation at a multi-user site. While the power density level produced by each individual licensee was within acceptable limits, the cumulative effect exceeded the limits, and that's why the stations were fined, the commission stated in the related notice.

**Action pending**

Fined were FM stations KBIG, KKBT and KRTH as well as television station KWHY. The licensees are Clear Channel, Radio One, Infinity and Telemundo, respectively. Final action on the proposed forfeitures is pending.

The investigation and subsequent fines were the result of an FCC surprise

See MT. WILSON, page 10 ►

## Most Radio 'Touchscreen' Suits Settle

Supplier Product Costs Go Up; More Suits Could Be on the Way

by Randy J. Stine

**DALLAS** Out-of-court settlements of a touchscreen patent claim against automation suppliers likely will add to the cost of what broadcasters pay for their systems.

However, the dispute over alleged patent infringement is not over yet. Sources familiar with the situation say additional automation suppliers could be sued after the new year begins.

Media Digital Corp. Inc. reached agreements in October with ENCO Systems, Radio Computing Services, Broadcast Electronics and Prophet Systems, which is owned by Clear Channel. The agreements cover the touchscreen systems those companies sell. Media Digital had alleged in the suit that those audio management systems contain touchscreen technology retained in a patent assigned to John Connell, formerly of MediaTouch and now president of Media Digital.

See TOUCHSCREEN, page 8 ►



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# TV Cap Debate Omits Radio

Media Ownership Late 'Compromise'  
Sparks Outcry From Democrats

**WASHINGTON** Senate Republican leaders and the White House may have reached a compromise on the TV audience cap, but Democrats objected. Radio, meantime, was not part of the compromise.

The TV cap provision is part of a year-end omnibus spending package, containing funding for several federal agencies. Of all the provisions Congress debated that would roll back portions of the new FCC media ownership rules, only the TV cap language made it into

the spending package.

New ownership rules passed by the FCC in June relaxed several rules for TV, while tightening some for radio. They would raise the TV audience cap, now at 35 percent, to 45 percent. However, the ownership rules are blocked pending challenges in federal court.

Some lawmakers want to maintain the 35 percent. But the Republican White House so opposed this language it threatened to veto the entire \$390 billion

spending package. A compromise reached just before Thanksgiving is 39 percent.

In a statement, NAB President/CEO Eddie Fritts said, "The NAB supports the compromise 39 percent national television ownership cap. While a 35 percent cap would have been preferable, we recognize the political realities surrounding this issue."

Senate Democratic leaders who opposed relaxing ownership rules said they were shut out of the process and not a part of the announced compromise. Sen. Fritz Hollings said 39 percent "was a total violation of the conference

agreement."

"The Republicans went into a closet, met with themselves and announced a 'compromise,'" stated Hollings, ranking minority leader of the Senate Commerce Committee. He chastised reporters for calling the figure a compromise as well.

Sen. Byron Dorgan, D-N.D., pledged to continue the fight to maintain the cap at 35 percent. Dorgan led an effort to overturn all the new media ownership rules with a little-used "resolution of disapproval" which passed the Senate but was blocked in the House.

Dorgan said the White House ignored language already approved by House-Senate conferees and persuaded the Republican leadership to insert language approved by the administration. He called the action "galling and unacceptable" in a letter to the leadership of the appropriation committees.

"The White House is not part of our conference," Dorgan wrote. "This is a legislative branch function. The House and Senate have both spoken and the conference committee made its judgment, which was to keep the roll-back language and close the section which contained it."

Dorgan and other opponents said they would try to remove the language from the spending measure before it goes to the President for his signature.

At press time, the House was expected to vote on the measure in early December while the Senate's timetable was uncertain; it could wait until January.

As part of the provision concerning the TV cap, the FCC would be required to review its media ownership rules every four years, rather than two. Commission Chairman Michael Powell had pushed for the change, and lawmakers agreed, saying the frequent review ties up limited resources and makes it hard on employees to attend to other issues.

— Leslie Stimson

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NEWS ANALYSIS

# What Does Kenyon's Exit Mean?

## Clear Channel Regional Engineers to Take Full Responsibility for Consolidations

by Leslie Stimson

**COVINGTON, Ky.** Are big radio buildouts done in the United States? No, but facilities definitely are not being consolidated at the furious pace of the last two years, according to directors of engineering for several of the major radio groups.

The discussion was prompted by news that Al Kenyon, Clear Channel Radio's senior vice president for projects and technology, is looking for his next position. His job has been eliminated.

Following the successful completion of several projects, "I worked myself out of a job," he said.

Kenyon, 53, had reported to Jeff Littlejohn, senior vice president of engineering for Clear Channel Radio, which will now turn over all the responsibility for buildouts to its 10 regional engineering managers. Littlejohn said.

"Their experience and knowledge of the markets will allow them to work more closely with the market staff. The regional engineering service managers have been involved in the projects before, but now they will be running them."

"Rather than assigning 20 projects to one person, we'll be assigning two projects a piece to 10 different regional engineers," he said.

Steve Davis, senior vice president engineering and capital management for Clear Channel Radio, would continue to oversee the budget implications of any related projects, he said.

### Cap-ex dropping

Additionally, Littlejohn said, the regional managers "have always overseen the RF projects for a market and the cap-ex budgets as well." The additional responsibility is a "natural extension of those duties," he said.

Kenyon oversaw office and studio consolidations, from 15,000-square-foot buildouts in small markets to 100,000-square-foot projects.

Clear Channel has told the investment community that project capital expenditures would decrease as the consolidation process matures and acquired properties are integrated into operating units. The action was a reflection of those cuts, Littlejohn said, although he said it doesn't mean there are no big consolidation jobs ahead for the company.

As time passes, an ever-smaller number of Clear Channel's markets operate non-consolidated multiple location facilities. The radio company has gone from dozens of consolidation projects annually to fewer and fewer projected for future years, said Kenyon.

"The new consolidation projects principally reflect potential savings in operating expense through elimination of multiple leases, and are often driven by existing lease termination dates," he said. "It becomes difficult to continue to offset one's compensation through savings resulting from project management of an ever-decreasing number of projects."

Projected budgets for studio and RF projects under Kenyon's oversight dropped roughly 50 percent for 2005, said

a source close to Kenyon, from roughly \$100 million in 2003 and 2004.

Littlejohn said he could not comment on any figures.

Kenyon's job may have been unique to Clear Channel, sources said. Lead engi-

kets are still seeing consolidation, but these are smaller projects that require less construction, he said, not as big a project as say, five stations in one building, requiring a buildout of 30 studios.

### Low-power start

Kenyon got his first taste of radio in high school at a 10-watt station, WSPE, in Springville, N.Y.



Al Kenyon, left, and former KFWB(AM) DOE Richard Rudman are shown in a photo at a meeting of the FCC's Media Security and Reliability Council last year.

neers for other radio groups who spoke to Radio World for this article said their companies did far fewer consolidation projects a year than Clear Channel, and none had a person specifically in Kenyon's position.

### Smaller groups

Cumulus Media Inc. and Susquehanna Radio Corp., for example, have teams of people responsible for various portions of consolidation builds.

Susquehanna involves regional and local engineers in the process. "It's a great training and learning experience for our engineers because every build is different," said Norm Philips, direction of technical operations for Susquehanna.

"Consolidation projects generally fall on me and the regional engineers," said Cumulus Media Corporate Director of Engineering Gary Kline. "We have different people who plug in at different points in the project."

That team includes real-estate personnel overseeing tower rental income, regional and local engineers as well as Executive Vice President John Dickey, he said.

"If they're 1,200 stations and their average number of clustered stations is six, that's over 200 cities," said one director of engineering for a major radio group, who asked not to be identified. "If you're in your average building 20 years, it would look like every year you're going to have 10 places relocating."

"I can't see the job going away. There's still plenty to do. But it may be, you just start building new versions of what you already had," the source said.

Watching the slowdown of purchases and sales as the industry awaits a final decision on the FCC's new media ownership rules, Philips of Susquehanna believes the major consolidations are done for a while. The small and medium mar-

"To transmit a signal, a GE Phasetron excited a 10-watt transmitter in a 48-inch cabinet driving a single-bay ring antenna on a 30-foot tower on top of the high school, located in a valley," he said.

"I read a chapter a day from 'Goodbye Mr. Chips,' played Air Force transcriptions and engineered home basketball games. As a public service, we didn't radiate very far."

The console was a Gates SA-40 "Speech Input Console." As chief engineer, he learned to troubleshoot the console by touching the preamp grid caps and listening for the buzz. "I learned not to touch plate caps about the same time," he said.

Kenyon's professional broadcasting career began in 1975 as radio chief for Taft Broadcasting's WKRC/WKRQ, Cincinnati. In 1976 he went to WDAF/KYY5, Kansas City as radio chief engineer. In 1988, he returned to Cincinnati to work with GM Dave Martin as CE for Jacor's WLW(AM).

By 1999, Kenyon was vice president of engineering for Jacor when Clear Channel bought that company.

He was in his latest position for a little more than two years.

Kenyon also represented the company on the Ibiqity Digital board of directors and the FCC's Media Security and Reliability Council. The company hopes to name the individuals who will represent Clear Channel before those two groups before the end of the year.

Kenyon was based in the Covington office. Sources said no other positions were eliminated in that office.

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# Radio World Plans Engineers' Honor

I'm delighted to break the news here that 2004 brings a new and special honor to our industry: The Radio World Excellence in Engineering Award.

The award recognizes individuals for excellence in U.S. radio broadcast engineering. The winner will be voted on by you, our readers, from a list of nominees selected by a panel of industry experts including engineers, managers, suppliers and Radio World contributors.

Our intention is to honor individuals who represent the highest ideals of the U.S. radio broadcast engineering profession and reflect those ideals through their contributions to our industry. Factors considered may include the person's engineering proficiency, certifications, project management skills, industry honors, service to industry organizations, commitment to mentoring, professional advancement, educational level and other contributions.

It's fitting that Radio World, with its long tradition of service to engineers, take this step. I expect that the Radio World Excellence in Engineering Award will be a significant career honor for a broadcast engineer, as it truly reflects the approbation of his or her peers.

We'll tell you more about this excit-



Peter King holds the bat with which Aaron Boone hit a walk-off home run to send the Yankees to the World Series with the Marlins.

ing development in a few weeks.

★ ★ ★

Tom Ray, Buckley Broadcasting's corporate director of engineering at WOR(AM) in New

York, drops me a note to let me know he has installed a Kenwood HD Radio receiver in the dashboard of his Ford Explorer.

"I think I can safely say that I am the only person in New York with an actual HD Radio installed in his car," he said in late November.

"Within the next two weeks, I'm intending to take a test ride armed with field-strength meters to see where the signal drops out. I am already impressed with where this guy locks onto the WOR IBOC signal."

Tom says it's a pleasure to drive around and not hear picket fencing on one of New York's biggest FM stations. "What's really amazing is to punch them up, hear the analog picket fencing something fierce, then have it dissolve into an absolutely quiet signal."

Tom will write more about his experiences for Radio World in an upcoming issue.

★ ★ ★

What can be done about the interference that HD Radio causes to adjacent AM channels? In an all-digital system, where should EAS signals be inserted? Will IBOC someday be able to provide

## From the Editor



Paul J. McLane

mobile video services?

These and many other questions arose during a recent online Web seminar sponsored by Harris Corp. and Radio World on the topics of HD Radio, IBOC implementation and Harris eXtreme Digital. Harris officials kindly agreed to reply to the questions in writing after the event. You can read their answers at [www.rwonline.com/webinarQA.html](http://www.rwonline.com/webinarQA.html).

If you missed the actual seminar, which hundreds of your fellow readers attended online, visit the archived version via the link at the top of that same page.

★ ★ ★

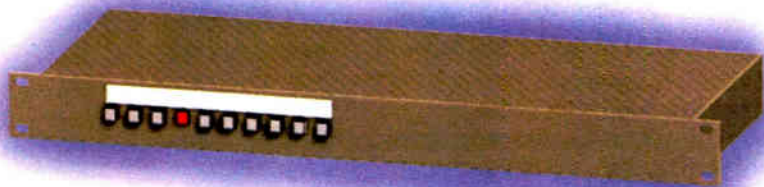
Radio World contributor Peter King, a correspondent for CBS Radio News, recently made a "crawl to the Hall," visiting the National Baseball Hall of Fame and Museum in Cooperstown, N.Y. He enjoyed an up-close look at some of this year's post-season artifacts headed for display at Cooperstown, including vials of mound dirt from Roger Clemens' last appearances at Yankee Stadium and Fenway Park; Aaron Boone's ALCS Game 7 home run bat; and the hat worn by Florida Marlins' manager Jack McKeon in the World Series.

King, a Florida resident who covered several World Series games, arrived in Cooperstown two days after the Marlins won the series. Hall officials think he was the first person with a Marlins jacket to enter the Hall since the end of the series.

Is this the face of a happy baseball fan, or what? Only eight weeks until pitchers and catchers report, Peter. 🌐

Shawn Fink of Shalom America in Beachwood, Ohio, is the winner of an SR10 10 x 1 studio routing switcher from Ram Systems. Features include 10 stereo inputs, one stereo output, removable connectors, mechanical interlock and steel construction.

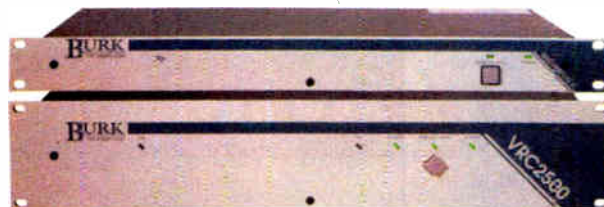
This is one of several configurations of switchers from the company, including 10 x 2 stereo, 6 x 4 stereo and 20 x 1 stereo. The passive routers are capable of switching audio and control circuits. Inputs, outputs and control are connectorized. Value: \$396.



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GUEST COMMENTARY

# Call Ahead for Reservations

Two Views on the FCC's Invitation for Petitions for Noncommercial Designation of New FM Channels

by John Wells King and John Crigler

The FCC Media Bureau has opened a window to permit noncommercial stations to apply for certain vacant FM allotments. John King and John Crigler are members of the law firm Garvey Schubert Barer in Washington, where they represent commercial and noncommercial broadcasters. In this written dialogue, they discuss different viewpoints on the topic.

**King:** In late September, the FCC announced that about 500 vacant FM channels could be reserved for noncommercial operation. These are commercial channels that were put in place by commercial broadcasters for commercial operation.

It's tough enough that the person who gets an FM channel allocated has no guarantee that he or she will get the station. How come the would-be commercial operators have to stand in line behind noncommercial operators? Doesn't seem fair.

**Crigler:** What's fairness got to do with it? No one has really had a shot at acquiring vacant broadcast spectrum since the FCC did away with comparative hearings in 1994. It's taken almost 10 years of administrative proceedings, amendments to the Communications Act and several trips to the court of appeals to replace the old system of awarding construction permits with new auction procedures.

The last stumbling block was figuring out how to handle situations in which a nonprofit and a for-profit each wanted the same frequency. The agency's first solution was simply to treat nonprofits like for-profits and require them to bid on any frequency set for auction.

**T**his looks like a veiled effort to keep new FM's out of the hands of commercial operators.

— John King

The court of appeals nixed that approach. The commission's latest approach gives nonprofits one last chance to reserve vacant frequencies before setting the frequencies for auction. Look on the sunny side: You're one step closer to an auction.

**King:** But I may wind up out in the cold. Look, the FCC set aside 20 channels for nonprofits, at the "left side" of the FM dial. Isn't that enough?

This "one last chance" for them to take away my commercial frequency seems like a second bite at the apple. Nonprofits already got all the LPFM channels — I can't apply for those. This looks like a veiled effort to keep new FM's out of the hands of commercial operators.

**Crigler:** The real issue is that there's just not much broadcast spectrum left for



John Crigler (left) and John King duke it out.

anyone. LPFM doesn't help existing noncommercial stations; they are barred from applying for LPFM stations.

Sure, the commission has reserved 20 of the 100 FM channels for noncommercial use, between 88.1 MHz and 107.9 MHz, but that doesn't mean all of those channels are really available. For a host of technical reasons — proximity to Channel 6 TV, to Mexican and Canadian allotments, and to the sometimes idiosyncratic growth of noncommercial radio — vacant reserved channels often can't be used.

Plus, nonprofits have always been allowed to operate on commercial channels. Many of the pioneer FM stations were noncommercial stations operating on non-reserved channels.

**King:** Well then, maybe two can play at this game. Perhaps I should claim-jump the nonprofit prospectors by reserving the channel I want, and get into the underwriting game as a noncommercial operator. Come to think of it, that would save me a bundle, since the channel wouldn't go to auction.

**Crigler:** Good luck, but I don't think you'll find that it's easy to reserve a channel and get a noncommercial license. You'll need to show that you are precluded from serving the community of license with a reserved channel. You'll also need to show that the non-reserved channel would provide a new first or second noncommercial service to at least 2,000 people over at least 10 percent of the station's service area.

Along the way, you may have to defend your showing that the reservation criteria have been met. Anyone who wants to keep the channel commercial can try to shred your engineering study.

There are plenty of uncertainties to

Assuming you survive these ordeals and get a permit for a noncommercial station, you're ready to begin a glorious new career as a professional beggar.

**King:** Okay, maybe the noncommercial route isn't as clear-cut as it seems. Just so I understand, if someone petitions to reserve a frequency I am interested in, to make it noncommercial, I can fight it, and we lock horns for another year or two, but if no one petitions to reserve it, the nonprofits are out of the picture, and the channel goes to auction — perhaps next year?

**Crigler:** This time, I almost agree with you. If no one petitions to reserve one of the 500 vacant channels by Nov. 21, 2003, the channel will be included in the next FM auction. You still aren't necessarily done with nonprofits, however. Nonprofits can participate in the auction and bid on a frequency as though it were to be used for a commercial station. Nonprofits just have to tuck in their wings before entering the commercial auction pit.

**King:** Then come one, come all, and may the highest bidder win. Is this a great country or what?

**Crigler:** It's a great country to have money in.

Reach the authors at [jking@gsblaw.com](mailto:jking@gsblaw.com) and [jcrigler@gsblaw.com](mailto:jcrigler@gsblaw.com). *RW* welcomes other points of view to [radioworld@imaspub.com](mailto:radioworld@imaspub.com).

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# ◆ NEWS WATCH ◆

## Wireless Broadband Gets More Spectrum

**WASHINGTON** The FCC has dedicated more spectrum to wireless broadband devices, a key recommendation of its spectrum policy task force.

The commission revised Parts 2 and 15 of its rules to permit unlicensed national information infrastructure devices in the 5 GHz band. The action frees up an additional 255 megahertz of spectrum, which could be used for broadband networks on an international basis.

The action, the agency hopes, will allow United States-based manufacturers to develop equipment in these frequency bands to work worldwide.

"This should result in lower costs to consumers of broadband services" and increase the availability of innovative equipment, stated Commissioner Kathleen Abernathy.

## ERI Closes Andrew Broadcast Purchase

**CHANDLER, Ind.** Electronics Research Inc. has closed on its agreement to purchase the broadcast product line

from Andrew Corp. The selected assets sold include filters, combiners and RF components for FM radio and television, antenna systems for television broadcast applications and rigid transmission line products

The purchase agreement includes Andrew assets from its Orland Park, Ill., location, and all of the assets at its Gray, Maine, facility.

Financial details of the transaction are not being disclosed.

## Philips Cuts Atlanta Staff

**ATLANTA** Philips Consumer Electronics North America is trimming its Atlanta-based staff by 30 percent under a so-called "voluntary separation program." The Atlanta Constitution-Journal quoted a Philips official as saying the roughly 113 jobs lost out of 375 total would be at all levels and in all functions.

The company offered incentives for people to leave, and intended to notify those who would be going, either voluntarily or not, this month.

In announcing its third-quarter finances, the consumer electronics segment reported an overall loss from opera-

tions in the third quarter of \$37.5 million, compared with a \$9.4 million operating profit for the same period a year ago.

Philips reported consolidated net income of \$145.1 million for the third quarter compared with a loss of \$386.3 million for the same period a year ago. Worldwide operating loss for the third quarter was \$147.5 million.

Philips told analysts in November it planned to reduce operating costs of its global consumer electronics business by \$468 million by the end of 2005, according to the company Web site.

The consumer electronics unit is part of Netherlands-based Royal Philips Electronics.

Philips semiconductor division, making chips for HD Radio receivers, is not part of the changes, a company representative told Radio World.

## FCC Lets Stand EAS, Tower Fine

**WASHINGTON** The FCC reaffirmed an \$11,000 fine for Southern Media Communications Inc., licensee of WBCA(AM), Bay Minette, Ala., for not having operational Emergency Alert System equipment, nor registering its tower. The station's tower height is more than 200 feet.

During an inspection in 2002, a field agent noticed there was no antenna registration number posted near the tower base. SMC President Walter Brown believed the structure was registered but could not provide documentation, according to the commission. The agent checked the FCC's records and found the structure was not registered and remains that way, according to the agency.

The station's EAS unit was installed and on, but not operational; it could not transmit a test message, the field agent stated.

In response to the fine, SMC argued the penalty should be cancelled because it later paid a contract engineer to start tower registration paperwork and repair the EAS unit.

The FCC countered that the tower remains unregistered, and that licensees are responsible for the actions of their employees and contract workers. And while the EAS equipment has been repaired, fixing it after it failed an FCC inspection does not negate the need for a fine, stated the agency.

SMC had 30 days to pay.

## NAB Gets Into Worship

**WASHINGTON** A conference at the spring NAB convention will focus on worship technology.

Production of programming for churches and ministries is a big and specialized one, and marks a new theme for the NAB. In the past, people interested in technology for faith-based applications typically have learned about them from other sources, such as the National Association of Religious Broadcasters' annual convention.

Sessions at the Worship Technology Conference will cover systems integration, television and video production,

audio production, multimedia presentation, Internet and Web casting and lighting for broadcasting.

An area in the exhibit hall called the Sound Mixing Pavilion will be located in the Radio/Audio Hall and showcase condensed presentations from sessions.

## OMT Buys Multimedia Content Provider

**WINNIPEG, Canada** OMT Inc. now owns what it calls one of the world's largest media databases.

The company, known to broadcasters as the supplier of MediaTouch products, has purchased the assets of musicmusicmusic inc., a Toronto-based multimedia content provider.

President/CEO Scott Farr said the deal gives OMT a database of 365,000 digital audio tracks and several thousand digital DVD movie and video game trailers.

"The sophisticated SQL content management database and a secure Internet-based content delivery system, also acquired as part of the transaction, provides the infrastructure to immediately deliver subscription-based multimedia services to existing clients and new customers."

Those services, he stated, include a commercial music service, branded Internet streaming radio service, digital audio updates services for radio stations and a retail CD, DVD and video game previewing service. OMT said it expects to distribute these services through business partners.

Separately, OMT also said it has signed an agreement with CBC-Galaxie to launch a commercial music service marketed primarily in Canada.

## Plans Laid for AES in Berlin

**NEW YORK** Audio buffs, get your passport in order. Details are out on the next AES convention — number 116, for those who are counting — to be held in Berlin in May.

Organizers also said they detected "an upswing" in the pro audio business at the fall convention in New York.

"In this newly positive business climate, the demand for detailed information about trends and technologies in pro audio is rapidly growing again," the AES stated.

The association touts Berlin, the new German capital, as a tourist attraction and said it expects a large number of visitors from the 10 new European Union members, including Poland, Hungary, Czech Republic and Slovakia.

## WorldSpace Gives Radios To Iraq Reservists

**WASHINGTON** WorldSpace Corp. planned to deliver 10 satellite receivers to the 354th Civil Affairs Brigade, a division of Fort Bragg, stationed in Iraq.

The company said it chose the brigade because the head of its government sales was a member of the unit for 10 years; he will deliver the receivers to the troops himself. The Maryland-based unit has about 250 reservists serving there.

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## Here is what some of our numerous Beta Testers had to say:

Clear Channel Director of Engineering for St. Louis Daryl McQuinn said: "Sounds much better than a bad [RPU], almost as good as a good [RPU], and way better than you should ever expect from a cell phone remote!" but all KLOU's Program Director Al Brock could say was, "Wow!"

Shaun Kassity from Salem Communications' 104.7 The Fish in Atlanta: "Thanks to Matrix GSM we had the best sounding remotes ever on our station!"

Steve Kirsch of Silver Lake Audio: "The feed was rock solid. I'm very impressed—it sounds much better than I thought it would."

Collin Mutambo, Rádio Simba, Kampala, Uganda: "We are indeed quite impressed."

But our personal favorite, from Jerry Dowd of Jefferson Pilot's WBT in Charlotte, NC: "We hope to keep the betas until you get nasty with threatening letters." Thanks Jerry. We'll take that as a compliment!

Testing has been successful in 25 US states and on 6 continents with more results coming in every day. The Matrix with the optional GSM Module delivers 7 kHz on GSM wireless. Now accepting orders.

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World Radio History

# Touchscreen

► Continued from page 1

Media Digital filed the complaint in U.S. District Court for the Northern District of Texas in May alleging patent

infringement suit, one supplier of touchscreen automation equipment, Scott Studios Corp., agreed to pay Media Digital a royalty of \$300 for each touchscreen system it sells. The company also agreed to pay a \$50,000 retroactive fee, said Dave Scott, president of Scott Studios Corp. and its sister company,

that will be passed on to broadcast customers."

Prophet Systems President Kevin Lockhart stated, "While we do not believe we infringed on the Media Digital patent, we sell very few touchscreens and couldn't justify the cost of continued litigation. Due to Media Digital's lawsuit, customers requesting touchscreen functionality will now be forced to pay an additional amount to cover royalty costs. The terms of the settlement are confidential, but include a royalty payment to Media Digital for each system sold using a touchscreen controller."

In an earlier interview with Radio World, Scott said he believed the MDC patent was invalid, but "agreed to the royalty fee payment as the less-expensive resolution" when compared to a lawsuit.

touchscreen would be unrealistic."

The original patent application, titled "Computer TouchScreen Radio Station Control System," was filed with the U.S. Patent and Trademark Office in 1985. After several continuation applications, Connell was issued the patent in 2000.

The patent abstract describes the system in part as "a computerized audio or video signal control system controlled by an announcer and having a display of the available signal sources and scheduled events." Claims contained in the patent also referred to a "touchscreen means for displaying information and for receiving input information."

Sources close to Media Digital believe more automation suppliers could be receiving notification from Media Digital regarding the touchscreen patent after the first of the year, including Smarts

**I'm satisfied with the progress we've made and feel things have been settled fairly.**

— John Connell, Media Digital

infringement by five broadcast equipment companies (RW, July 16).

## 'Satisfied'

Broadcast Software International, owned by Cumulus, is the lone remaining defendant in the suit; it had until early December to file an answer to Media Digital's complaint in court.

"I'm satisfied with the progress we've made and feel things have been settled fairly," Connell said. "We continue discussions with BSI with hopes of a conclusion."

Under the agreements, Connell said he could not disclose the dollar amount of the settlements.

The original complaint stated, "Media Digital has been irreparably damaged to an extent not yet determined."

Prior to the filing of the patent

Computer Concepts Corp.

Because of the agreement, Scott said, no suit was brought against Scott Studios. A source said it's likely similar arrangements were offered to the five defendants in this case.

According to court documents, all claims against ENCO Systems, Radio Computing Services, Broadcast Electronics and Prophet Systems/Clear Channel were "dismissed with prejudice." This precludes Media Digital from taking this specific legal action against the companies in the future.

ENCO Systems released this statement: "ENCO acknowledges no infringements on the Media Digital patent claims. However, in the interest of avoiding a long, expensive legal action, we have agreed to settle out of court. This settlement includes a per-touchscreen fee

**This is a wake-up call for broadcasters to take RFR compliance more seriously.**

— Double R's Robert Reymont

RCS and BE declined comment for this story.

## Digital systems

Scott said Media Digital went after his company first because of its prominence in the digital systems marketplace.

"We absorbed the settlement quickly as a service to our customers. To expect our customers to retreat to using a mouse or trackball and lose the ability to use a

Broadcast Systems.

"Anyone selling a touchscreen system could be open to litigation," the source said.

Connell is a 63-year-old entrepreneur who founded MediaTouch in 1984 with the help of several investors. He sold the company in 1995.

Media Digital Corp. is based in Salem, N.H., and sells touchscreen systems to the mobile DJ entertainment industry. 🌐

# Sabre Lightweight Towers

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## ◆ NEWS WATCH ◆

### Radio Sawa No. 1 In Iraq: Survey

**WASHINGTON** Nearly half the residents surveyed in Iraq's three largest cities tune in to Radio Sawa on a weekly basis, according to a survey released by the Broadcasting Board of Governors. The BBG's Radio Sawa is a new Arabic-language station funded by the U.S. government.

D3 Systems Inc. of Vienna, Va., conducted the survey in Baghdad, Mosul and Basra. Baghdad is Iraq's largest city with about 5.6 million people; followed by Mosul, 1.7 million; and Basra, 1.3 million.

According to the survey, 43 percent of adult respondents in Baghdad listen to Radio Sawa, 46 percent in Mosul and 69 percent in Basra. More than 50 percent of the women surveyed listen to Radio Sawa weekly. A similar figure was seen for those under age 30 and for those having a secondary education or higher.

Researchers for the BBG, which oversees U.S. nonmilitary international broadcasting, said the survey data should be considered preliminary but indicative of current international radio use.

The survey also showed Radio Monte Carlo enjoying an average listenership in Iraq of 39.2 percent; the BBC, 30.4 percent; and Radio Free Iraq, 10.3 percent. RFI is run by Radio Free Europe/Radio Liberty, an entity of the BBG.

One thousand listeners took part in the survey.

### Puerto Rico Station Fined

**WASHINGTON** The FCC fined Radio X Broadcasting Corp., licensee of WXLX(FM), Lajas, Puerto Rico, \$20,000 for not keeping its tower painted nor maintaining a public inspection file at the main studio. During an inspection last year, when the field agents asked to see the file, the operator on duty told them it was at the station owner's office, 100 miles away from the city of license. Radio X did not dispute the findings, but asked to have the penalty cancelled or reduced, citing financial difficulties.

The commission said the company did not submit enough information to verify that claim and though the station corrected the violations, doing that after being cited is not enough to warrant a penalty reduction. The station had 30 days to pay.

### Ham Event Returns With New Sponsor

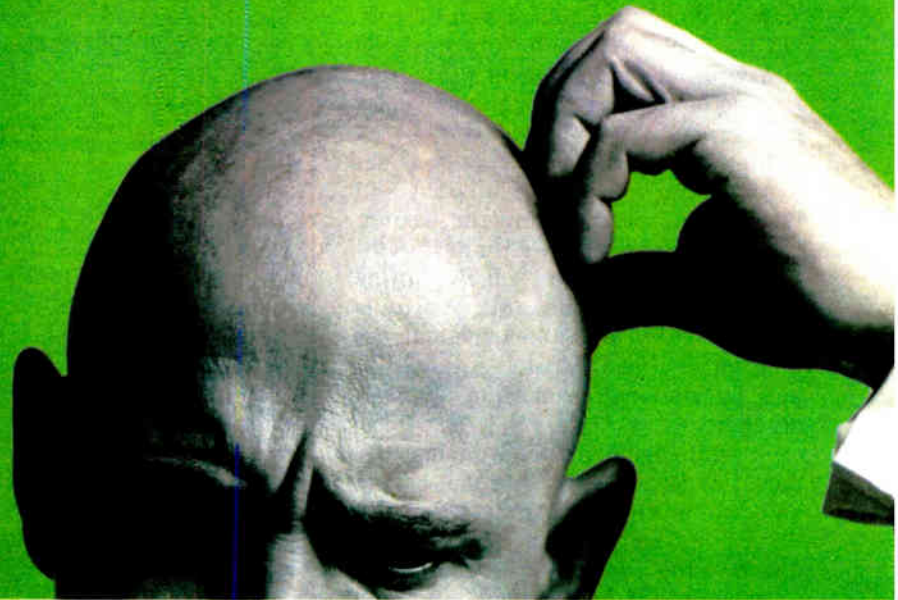
**FAIRVIEW HEIGHTS, Ill.** The Amateur Radio Operators Reception will have a new sponsor at NAB 2004 — Heil Sound Ltd. The popular ham event is free to NAB attendees, and includes food and drink.

The company said it would offer prizes, including Heil ProLine performance mics, signed by Joe Walsh of the rock group the Eagles. Kenwood Communications and CQ Magazine sponsored the event last year.



# Wish you had more

# up top?



## Announcing Omnia-6EX.

There's a lot of buzz about the new HD Radio codec. We've heard it and agree with the many others who like it and say it's now time to get on with radio's transition to digital.

Because HD Radio can transmit audio frequencies up to 20kHz, listeners will finally be allowed to hear the full CD spectrum – if their radio stations choose the right on-air processor. On this point, you should know something important: Some “HD” processors simply hack off everything above 15kHz... robbing listeners of the full HD Radio experience and keeping our industry in a fidelity backwater.

The new Omnia-6EX won't short-change your listeners. We've built Omnias with sampling rates of 48kHz and higher from the start. All along, we've needed the sampling headroom to keep analog FM audio grunge-free. Now it's essential for HD Radio. Even if some listeners wouldn't notice the missing high frequencies, there's a fair chance they would hear a sharp 15kHz low-pass filter operating within HD Radio's codec range.

Omnia-6EX is also full of processing enhancements that result in yet more bass punch, yet more voice clarity, than the original Omnia-6. A sound so powerful and free of artificial constraints, you'll crave it for your station the first time you hear it.

More than 50% of the US' Top 100 FM stations have already upgraded to Omnia. Maybe you're next?



*The new Omnia-6EX has enhanced processing for analog FM, and is ready for HD Radio with a second limiter section and digital output. Both FM and HD limiters and outputs are included as standard.*

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# Mt. Wilson

► Continued from page 1  
inspection at the Mt. Wilson telecommunications and antenna farm site in July of 2002.

According to the commission's report, "FCC agents were able to access the site without encountering protective fencing or warning signs on three sides of the area."

Many broadcast engineers consider Mt. Wilson one of the busiest and largest antenna farms in the nation. Located approximately 25 miles northeast of downtown Los Angeles in the San Gabriel Mountains, Mt. Wilson is home to 25 FM and 20 television transmission facilities. Most L.A.-area FM and TV station transmission facilities are there.

Several engineering consultants contacted by Radio World said that having an accurate RFR field study, especially in cases of multi-use facilities, should now be a top priority for broadcasters.

"Clearly, the FCC is now enforcing its rule that holds all stations jointly responsible for achieving compliance with its RFR limits," said Bob Weller, senior engineer with consulting engineering firm Hammett and Edison.

"The FCC's field staff have visited a number of high-profile, multi-use sites the past two years. Those with obvious

RFR problems could now be targeted for formal follow-up inspections."

Weller said any station that creates 5 percent or more of the maximum power density permitted at a given location is regarded by the FCC as a significant



In a photo taken shortly after the original FCC inspection, a tower worker in the KMEX driveway uses a meter to measure a 'hot spot' marked by the commission with green paint.

contributor to the problem and is eligible for a citation if the aggregate power exceeds the proscribed limit.

The FCC's NAL in the Mt. Wilson RFR incident states, "All licensees found producing power density levels significantly greater than 5 percent of the FCC's public limits for its particular transmitter share responsibility to

president of Double R Consulting, an engineering services provider.

"I travel the country and see many multi-use sites and observe similar operations and crowding," said Reymont. "This is a wake-up call for broadcasters to take RFR compliance more seriously."

Reymont, who also is technical committee chairman for South Mountain near Phoenix, home to nearly 50 TV and FM radio stations and translators, said, "In light of the citations issued for Mt. Wilson, we are addressing our site RF plan revisions."

The FCC invoked more restrictive radiofrequency radiation maximum permissible exposure limits in 1997 and established a deadline of Sept. 1, 2000, for broadcaster compliance.

The maximum RFR exposure standard for the general public is 0.2 milliwatts per square centimeter in the frequency range of 30 to 300 MHz. The occupational exposure rate is five times greater than the public exposure limit.

The FCC is considering even further modifications to its RFR guidelines. A Notice of Proposed Rule Making (ET Docket 03-137) was issued earlier this year that could change the commission's rules for routine evaluation of compliance with exposure guidelines. Comments were due by Dec. 8.

RFR maximum permissible exposure limit violations have been few to this point. NALs were issued in 2002 for KWNZ(FM) in Carson City, Nev., and KTMN(FM) in Cloudcroft, N.M., for \$10,000 and \$28,000 respectively. Yet the commission has determined that an appropriate base penalty amount for violation of the RFR MPE limits is \$10,000, noting the public safety nature of the rules.

## Cooperation

Broadcast engineers familiar with the Mt. Wilson site believe a lack of cooperation between broadcasters in 2002 during the installation of a new antenna for KDOC(TV) resulted in the FCC's inspection at Mt. Wilson.


One Los Angeles-based broadcast engineer said cooperation among broadcasters on Mt. Wilson has increased since the initial FCC inspection.

"Requests from stations to reduce power are now being honored. There is no longer an element of pleading or threatening," the source said.

He said additional safety measures have been added to the Mt. Wilson transmission complex.

"There are more RF warning signs and fewer shortcuts from building to building because of additional fencing now, though the area is still not entirely fenced."

One of the unique features of the Mt. Wilson antenna farm is its proximity to public areas, Weller said. The entrance to Mt. Wilson Observatory and Park is approximately 350 yards from one of the "hot spots" from 2002, and a post office is within 100 feet.

Despite stepped-up security at Mt. Wilson, this September a commission inspector found an open gate that leads to one of the sites entrances. As a result, the commission asked the licensees to submit their plans to ensure fences surrounding the antennas are shut and gates secured with their responses to the NAL. 

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The new "Rack-Able" SS 4.1 III switcher replaces the popular SS 3.1 while adding a fourth stereo input channel and front panel control. We've kept the best of the SS 3.1 features and added a few more.

The new Silence Monitor III improves on the features of the original SSM, with front-panel control, removable screw terminals, "Plug & Play" installation, built-in program switcher, restore timing delay, aural alarm and relays for most remote functions. Now rackable!

The new SS 8.1 II switcher replaces the popular 6x\* with the addition of two more stereo input channels and GPI, while keeping the price the same! The SS 8.1 II may be desktop, wall mounted or installed on the new "Rack-Able" mounting shelf.

The new RA-1 (1-RU rack shelf) provides mounting for three tri-rack or two half-rack "Rack-Able" configured products. The RA-1 is pre-drilled for flush and recessed product mounting. The RA-1 is furnished with filler panels and mounting hardware.

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ensure compliance to limits. Specifically in this case, KBIG contributed 81.75 percent, KKBT produced 11 percent, KRTH produced 11.75 percent and KWHY(TV) contributed 10.5 percent."

The FCC declined to comment for this story. A spokeswoman said the commission was still waiting for responses from the licensees and had not moved toward any final action.

Licensees filed for an extension until mid-December to make their replies to the commission. Weller said they have three options: accept the liability and pay the fine; ask for a reduction in the fine due to extenuating circumstances or inability to pay; or show they did not violate the rules and ask for the dismissal of the NAL.

The FCC will consider the replies and then either issue a Notice of Forfeiture, which reaffirms the fine, ask for additional information or dismiss the penalties, Weller said.

"With the timeline being uncertain due to the holidays, I would not expect a final decision until early next year," said Weller, a former commission field engineer and member of the RF Exposure subcommittee for the International Committee on Electromagnetic Safety.

## More common

The radio broadcasters involved in the RFR incident failed to return messages seeking comment for this story.

Most observers think the Mt. Wilson RFR exposure episode is far from an isolated case.

James Hatfield, partner in the consulting engineering firm Hatfield and Dawson, said, "We are aware of numerous mountaintop sites in the western U.S. where RFR levels are relatively high. It would seem prudent that licensees monitor these sites and have the areas restudied if changes have been made."

The digital TV conversion has yielded additional concerns and problems for multi-use sites, said Robert Reymont,

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Radio World, Dec. 17, 2003

Past columns are archived at [www.rwonline.com/reference-room](http://www.rwonline.com/reference-room)

## Winds Aloft! Batten Down the Coax

by John Bisset

To say the weather throughout the country has been bizarre recently is an understatement. From flooding to fire

and hurricane-force winds, it seems broadcast engineers are dealing with new perils every day.

Other than developing a "doomsday" site for emergency backup, there's not

much an engineer can do to fight many of these natural perils — or is there?

When was the last time your tower was inspected? By inspected, I mean a rigger checking all the lines as they climb

leg with the steel wire used to tie pieces of rebar together.

Then the winds came.

If you ever wonder why butterfly or snap-in hangers are used, Fig. 1 will help justify the cost. Look at the three 7/8-inch lines running up the left side of the tower. These are the ones that were lashed to the leg with the steel wire.

Strong winds tore the cables from their



Fig. 1: The 7/8-inch lines running up the left side were lashed to the leg with steel wire. Winds tore the cables from their mounts.



Fig. 2: The replacement dish is hoisted into place.

to the top, and making immediate repairs — not postponing the work until next year. If you own your tower and lease space to others, what safeguards have you put in place to ensure that not just any jack-leg climbs it?

### SNAP!

The questions are pertinent. For example, a major-market tower recently was fitted with coax lines for a new tenant. No one seems to know who did the work; the lines just appeared one day. To save money, the lines were lashed to the tower

mounts, and they were flapping in the breeze. Notice the STL dish being hoisted. The cables swung so far that they damaged the feed horn of the STL dish, snapping the dish off its mounts.

Fig. 2 shows the replacement dish being hoisted into place. This photo also gives you a better picture of the haphazard way these lines were installed.

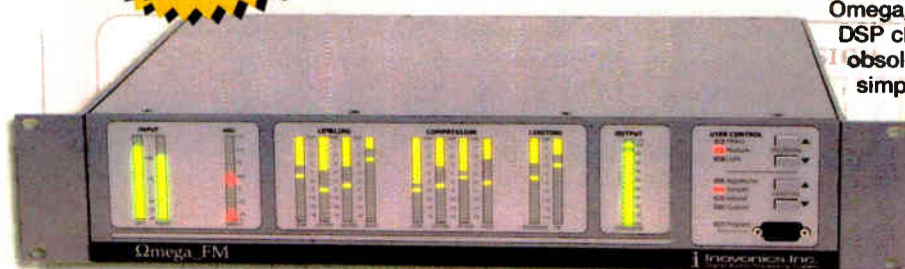
Not only were the lines swaying in the breeze; so was the tower structure. Improper support takes its toll. Fig. 3 shows those same three lines, at ground

See WORKBENCH, page 14 ▶

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# What's better than MP3? Broadcasters agree: it's AAC.

Being a technology leader is something we take pretty seriously. When new tech is introduced by a Telos product, you can be confident it's the absolute best – so you shouldn't be surprised to find high-performance MPEG AAC coding in the latest Zephyr products.

Remember the original Zephyr? Its introduction of MP3 coding turned broadcasting upside down, and since then MP3 has become extremely popular for audio distribution, especially on the Internet.

But MP3's compression technology is now over a decade old, and there have been a lot of advances in perceptual audio coding and compression since then. You wouldn't settle for a '386 computer these days – so why be content with compression technology from the same era? What you want is Advanced Audio Coding... MPEG AAC.

MPEG AAC takes advantage of all of the latest advances in compression technology. Compared to MP3, AAC delivers higher quality audio at much lower bit rates, resulting in noticeably better audio even over low-data-rate connections. AAC also cascades better than older codecs – especially important for HD Radio considerations.



## Move Over, MP3

AAC was developed by the Fraunhofer Institute for Integrated Circuits (FhG IIS, the inventors of MP3) and a consortium which included Sony, Dolby Labs, Nokia and AT&T. Their goal: to create a codec

that would satisfy the International Telecommunications Union's Recommendation BS.1115, which specified indistinguishable source-to-output quality at 64 kbps per mono channel. They succeeded with AAC, which is a coding algorithm *30% more powerful* than MP3.

AAC is, by scientific and subjective analysis, the best-sounding, most efficient pure perceptual codec yet, and has been part of the International MPEG-4 standard (ISO/IEC 14496) since 1999. As a point of reference, the near-

CD quality Layer 2 codec needs a data rate of 192 kbps per channel to deliver high-quality stereo; AAC gives the same quality at just 64 kbps!

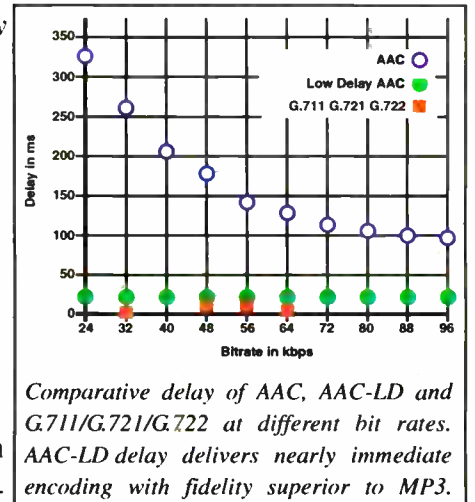
"The AAC codec outperforms the rest of the codecs," stated Canada's Communications Research Centre after performing double-blind subjective tests of 17 codecs (including MP3 and Layer 2) to determine which was best.

"When compared side-by-side, AAC proves itself worthy of replacing MP3 as the new Internet audio standard," says Apple Computer, which has incorporated AAC into its latest software products.

## Better Audio, Less Delay

In addition to "plain" AAC, broadcasters have another tool specifically designed to improve the performance of remote audio transmissions: AAC Low Delay (known as AAC-LD for short).

AAC-LD slashes encoding delay by nearly 70% compared to MP3 – invaluable for real-time two way broadcasts. It also employs new techniques to offer both low delay and high fidelity. Compared to speech coders (such as G.722), AAC-LD handles both speech and music with good quality. Unlike speech coders, however, audio quality scales up with bit rate. With AAC-LD, audio quality is far superior to G.711 or G.722 at the same bit rate, and equal or better to MP3 at the same bit rate.



Comparative delay of AAC, AAC-LD and G.711/G.721/G.722 at different bit rates. AAC-LD delay delivers nearly immediate encoding with fidelity superior to MP3.



Both AAC and AAC-LD are featured in the Telos Zephyr Xstream rack and portable codecs.

Major personalities such as Rick Dees have come to rely on AAC-LD for better-sounding remotes. Jerry Burnham, KIIS-FM Special Projects Engineer, told us "AAC-LD coding in Zephyr stream is amazing. Low-Delay coding is a tremendous advantage. We get fantastic-sounding remotes, and we can interact with phone callers, traffic reporters and other remote sources without that annoying time lag."

## "The Best Low-Bit rate Codec on Earth"

There's one more exciting part of the AAC story: *aacPlus*<sup>TM</sup>. This extension of AAC melds Spectral Band Replication with MPEG AAC, resulting in truly stunning audio fidelity at bit rates never thought possible before. In tests conducted by the European Broadcasting Union (EBU) which compared a variety of codecs at several bit rates, they declared *aacPlus* as the clear winner, significantly outperforming proprietary competitors and improving over other standards; studies conducted by DRM and MPEG confirmed that *aacPlus* is ideally suited for the low bit rates of AM & FM IBOC. *aacPlus* has been chosen for use by XM Satellite Radio and Digital Radio Mondiale, and will soon be in 2.4G and 3G audio applications deployed by Matsushita and NEC.

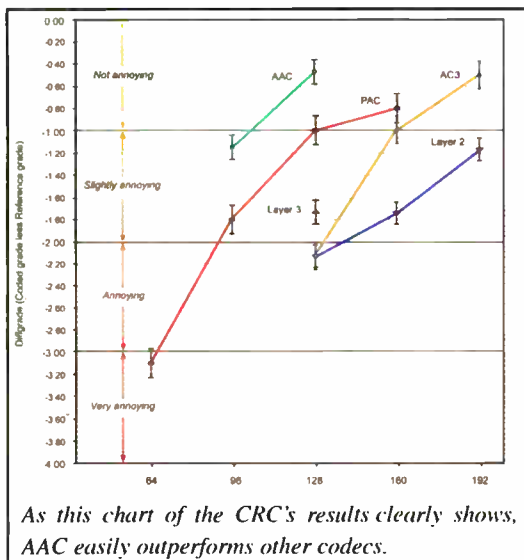


Zephyr Xport is the only POTS codec with *aacPlus*. It can send 15 kHz mono audio over analog lines.

Industry experts agree. "AAC Plus is the future... all else is stone knives and bearskins," according to Gary Blau of Jefferson-Pilot Communications. Jeff Johnson of X-Star Radio Network agrees: "It is quite amazing how decent a 32 kbps bitstream can sound."

Telos has chosen *aacPlus* as the algorithm used in the new Zephyr Xport POTS + ISDN codec. Paired with custom modem technology developed by Telos, *aacPlus* enables Xport to send 15 kHz mono audio over ordinary POTS phone lines.

Of course we hope you will purchase Telos equipment. But even if you decide differently, make certain that whatever codec you do purchase – POTS, ISDN, serial or otherwise – takes full advantage of today's advanced audio coding technology. Make certain it has AAC.



telos-systems.com

# Workbench

► Continued from page 12

agile exciter and a broadband antenna bay that can give you some kind of backup until your full-power facility can be repaired.

Do you have a spare STL dish? If not,

place, test them. As too many engineers found out this summer, a generator that won't start is no kind of insurance.

As for the tower, consider inserting a clause in your lease that prohibits just any tower crew from installing or working on your tower for your tenants. Stipulate that you must be notified in advance of any work to be done and who will be doing it.

Get copies of the tower rigging company's insurance certification and request these directly from the insurance company, to make sure the policy is current. If \$20 bills can be printed on laser printers, so can insurance certifications. You just can't be too careful these days.

Consider arming the tower or gate perimeter with a motion detector, tied to the remote control, to warn you of unauthorized entry. And in the case of the rebar tie-wire, the lease should state that any installations use the appropriate manufacturer's hardware, preferably approved by you prior to the installation.

You can't be prepared for every disaster, but a little forethought can reduce the impact.

*John Bisset has worked as a chief engineer and contract engineer for more than 30 years. He is the northeast regional sales manager for Dielectric*

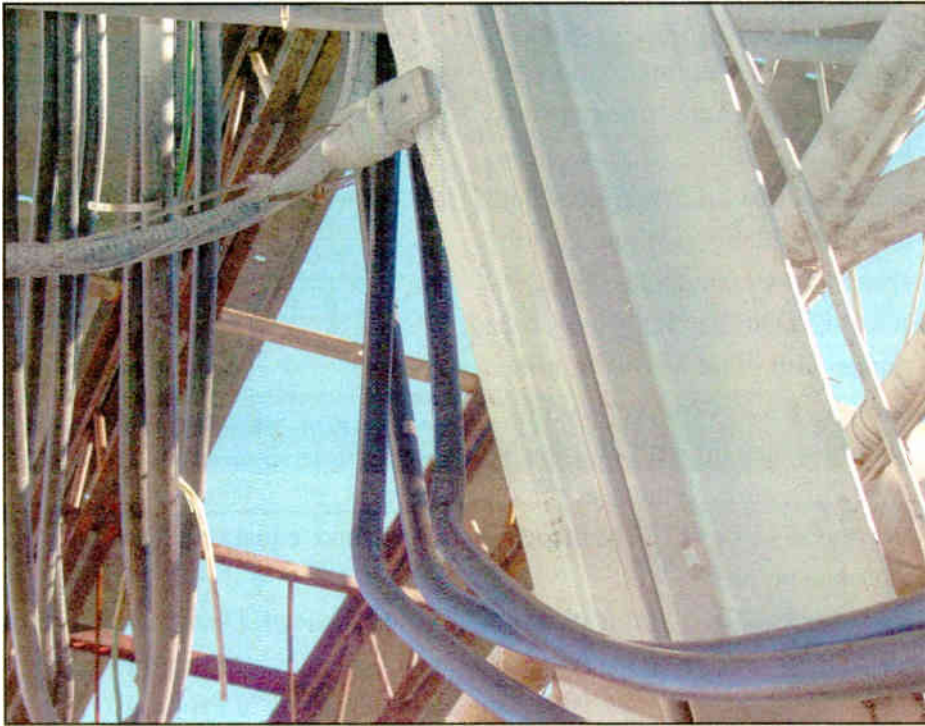


Fig. 3: Improper support takes its toll.

level, bent, as the wind moved both the tower and the unsupported line.

What's interesting in this photo is that the damage, especially to the line to the right, was caused by the line being pulled taut and rubbing against the white insulator that's anchored to the tower leg, about a foot and a half above the lines. This movement occurred as the wind used the lines as sails, once they broke free from the rebar fastening wire.

Fig. 4 shows where these lines enter the communications building. The line in the center of the photo has been pulled out nearly 5 inches (note the sealant on the line) by all this action.

Although I couldn't see inside, I imagined this transmitter rack sitting lopsided on two of four feet.

### Back it up

So what do we conclude from this catastrophe? First, think backup systems. Even if it's a Comrex HotLine that can be pressed into "STL" use, have a plan for this kind of problem.

With decent pricing of ISDN service, a growing number of station engineers have installed ISDN lines to transmitter sites. Better yet, consider a frequency

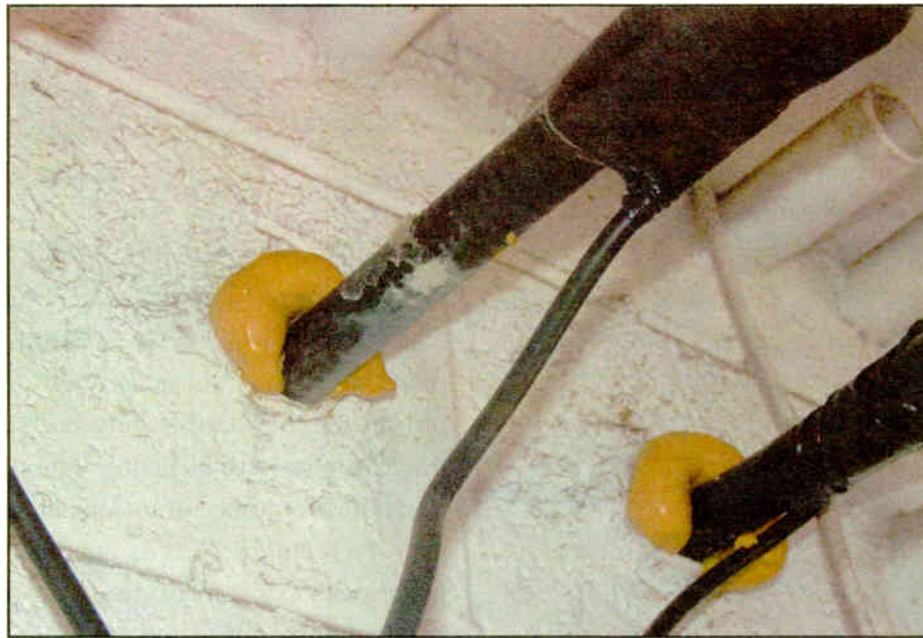


Fig. 4: The lines enter the building. The one on the left has been pulled out nearly 5 inches.

consider investing in a spare feed horn. Don't forget the pigtails, either. Both can go bad and spoil your day.

There's a limit to what you can do to, of course. But if you've set backup systems in

Communications. Reach him at (571) 217-9386 or john.bisset@dielectric.spx.com.

*Submissions for this column are encouraged and qualify for SBE recertification credit.*



The Broadcasting Board of Governors awarded a contract to Harris Corp. for radio transmitters and other equipment to be used to help rebuild the communications infrastructure of Iraq, for programming through Radio Sawa, Radio Free Iraq and Voice of America.

The contract includes Harris Quest-1 1kW FM radio transmitters, Z10FM 10kW FM radio transmitters and Z5FM 5kW FM radio transmitters, along with accessories and additional equipment from Orban. Harris has created an Iraq Initiatives Office to pool the products of its five communications businesses for opportunities related to the rebuilding of Iraq. ...

Dielectric Communications is working with Cumulus Radio's John Dickey, Gary Kline and WNNK Engineering Manager Dave Supplee on the installation of the company's first interleaved analog/HD Radio FM antenna. Supplee suggested the market of Harrisburg, Pa., because of the mountainous terrain and multipath issues. Kline, the corporate DOE, said, "This will be a good test to evaluate the improvement HD radio offers in severe multipath locations." ...

Wicks Broadcast Solutions entered into an agreement with Infinity Broadcasting to integrate Wicks' DeltaFlex 4 Broadcast Management and Control Tower Reporting and Data Consolidation systems into Infinity's 185 radio stations. Wicks CEO Pete D'Acosta called it "a landmark deal" for his company.

"Once the standardization is complete and Control Tower is installed, Infinity will have secure access and an accurate daily snap shot of every station from each traffic system." ...

Radio Ventures in New York has transferred its shipping business to FedEx, the carrier said. The company creates new-age music CDs by emerging artists and distributes them to radio stations.



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# Will the LAMP Stay Lit?

*The Rights Wars Continue as an Innovative Campus-Based Music Service at MIT Is Established, Then Quickly Challenged*

by Skip Pizzi

Recent RIAA activity has given new meaning to the words "customer service." The trade association has "served" a number of American citizens, mostly students, with lawsuits citing them for violation of copyright by posting published music on peer-to-peer file sharing Web sites. This latest salvo in the P2P music wars has had substantial resonance in the industry and raised more than a few eyebrows, given the potentially damaging marketing message for an industry that already is in dire straits.

Yet despite its draconian and seemingly overreaching style, the action has had some of the desired impact on P2P users. Activity at such sites seems to have waned measurably since the lawsuits were first served a few months ago, as confirmed by several studies.

One such report, from New York-based NPD Group, notes that the number of households acquiring digital music via peer-to-peer file-sharing services declined by 11 percent from August to September 2003, and that during this period 1.4 million households actually deleted all the digital music files saved on their PC hard drives. The researchers also reported that 60 percent of consumers who had downloaded music files (and 40 percent of those who had not) felt that the lawsuits had given them a negative impression of the music industry in general.

The RIAA's calculated risk seems to be having an effect, modifying consumer behavior that it finds inhospitable to the conduct of its members' business, but creating an unfavorable image for the industry in the process.

Recently, a new approach was launched by students at the Massachusetts Institute of Technology in Cambridge, Mass. The venerable institution has long had a popular campus radio station, WMBR(FM), which had an early online presence. But this new service is a clever combination of online and broadcast services. It attempts to sidestep file-sharing litigation by blurring the lines between old and new technologies, and leveraging some traditions in copyright law to its advantage.

**How it works**

At the heart of the system is a Web site hosted by the university, at which users can order up a playlist of songs like they would on a P2P or interactive Webcast site. The difference in this case is that the music is not *delivered* from the site as files or a real-time stream online, but as a broadcast over the campus cable system, using traditional analog FM audio delivery. Currently there are 16 cable channels set aside for the service, although more could be added.

The process is as follows: An on-campus user goes to the Web site and is given access to an 80-minute slot on one of the cable channels. The user then selects music from a library of about

3,500 CDs until the 80 minutes are occupied, and playback begins. Anyone on campus can tune to any of the 16 channels, receiving the music through an existing cable set-top box or cable-ready TV. Analog stereo audio outputs from the cable STB can be routed to a PC, boombox, cassette deck, hi-fi receiver, etc., for listening and/or legal recording, as with any broadcast.

While the music is playing, the

channel's video signal displays information about the currently airing playlists and the programmers who selected them.

**Why it matters**

The system benefits from two traditions: broadcasting's exemption from music performance royalties, and colleges' blanket licenses that allow public performance of published music at an extremely low, fixed annual cost. Both of these traditions are based at least partially on the thinking that such "airplay" stimulates greater sales of recordings. The MIT system acts as an

See RIGHTS, page 16 ▶

## The Big Picture



Photo: Gary Hayes, BBC

by Skip Pizzi

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# Lambert Made News Early and Often

by Ken R.

The death of Robert D. Lambert Jr. in October at the age of 87 marked the passing of an engineer who was always eager to learn.

His career started in 1932 when he built his own AM station at a time when radio was still a novelty. He was 16.

"He called it KBRPC, which stood for Bugs River Power Company," said his son Robert III. "The station was heard Saturday mornings through his neighborhood, and Bugs was his pet collie."

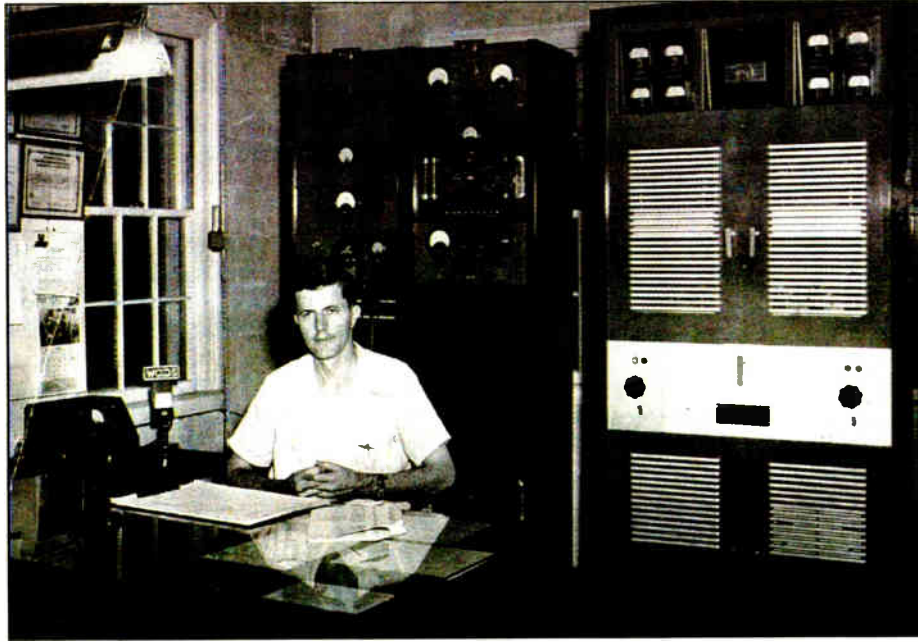
Even before his graduation from the University of South Carolina with a B.S. in electrical engineering, Lambert's professional career began as a transmitter operator at WIS(AM) in 1935, according to his obituary in The State newspaper.

He worked for the FCC in Miami prior to World War II. Upon discharge from the Navy, he was chief engineer of WCOS(AM) in Columbia, for almost 20 years. During that stint he was instrumental in starting the first TV station in South Carolina, WCOS(TV).

From 1965 until 2001, he was self-employed as radio consulting engineer and continued to operate his ham station, W4BZX, which he began in 1933.

David Warren is executive director of the Richland County Public Library in Columbia and a friend of the Lambert family.

"In the late 1920s, Mr. Lambert built a robot," he said. "The Associated Press picked up the story



At work at WCOS in an undated photo.

... I always wondered what happened to that thing."

Lambert's daughter Mary Beth McSwain recalled her father as a man of precision.

"He discovered a mistake in the World Book Encyclopedia and wrote to their parent company, Field Enterprises Educational Corp., to point out the error in the then-current 1963 Volume 16," she said. "The book said that WIS(TV) was the first TV station in South Carolina, but that honor actually went to WCOS(TV). To its credit, World Book acknowledged the correction in subsequent editions."

Lambert's son agreed that his father

due to its on-demand nature. But LAMP's developers felt that their system was protected from such challenges because the regulations authorizing royalties for on-demand services only applied to digital delivery. Nevertheless, hardly a week had passed after MIT's launch of the service before the first such challenge arose, from Vivendi's Universal Music Group (currently the largest of the music publishing conglomerates).

Rather than a full frontal assault on MIT, however, UMG instead advised Loudeye that the terms of its agreement with the music publisher did not allow the type of distribution that the MIT service provided. Loudeye then advised MIT of this communication from UMG, and the university immediately suspended the LAMP service.

MIT continues to pledge that a primary tenet of the project is its fully legitimate operation, so until the appropriate rights are secured to all parties' satisfaction, the service will be curtailed. At press time, MIT reportedly was engaged in discussion with Universal and other labels to obtain legitimate rights for the LAMP service. Meanwhile, the university said it might attempt to receive some relief from Loudeye on the price of its music purchase, because the provider had assured MIT that adequate rights were already secured.

If nothing else, this episode reflects the fluid environment that now exists in the area of intellectual property law.

Skip Pizzi is contributing editor of Radio World.

always "wanted to get things exactly right."

"He had an appreciation for well-made, quality machinery," he said. "We have a 1953 Ford sedan, which Daddy bought new. A few years ago, he had it reupholstered with original fabrics, and he and his mechanic friend replaced the wires one-by-one as needed and repaired the gas tank.

"My father couldn't finish the job before he had to go into the hospital in 2001, but his friend and I completed the work and drove it out to surprise him at the nursing home where he was staying. I wish you could have seen his face when we drove up. He was happy because it was finally a completed project."

"He loved art and poetry," said Warren. "He would pick up an acorn and marvel at it."

"I think he remembered everything he ever learned," said Robert III. "He took a French class back in high school and was still able to translate a phrase when he and my mom were watching a TV show a couple of years ago. He could have won some money if he had ever appeared

on 'Jeopardy.'"

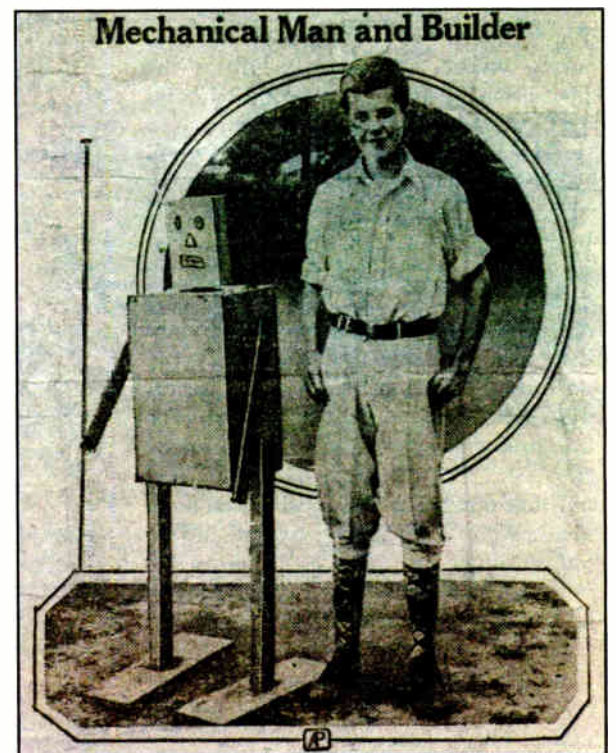
Milton Holladay, an engineer who worked at WCOS, said Lambert was the guy everyone called when they were stumped.

"I can believe that," said Rob. "He had that engineering mentality where he had to know how everything worked. He brought home a microwave one day and didn't stop at just learning how to turn it on; he figured out everything about it and told my mother exactly why her coffee was warming up, how those molecules were bouncing around."

Lambert Jr. was also a family man. His wife of 47 years, Beth Lambert, recalled his appreciation for "God's innumerable little blessings."

"He was so thankful for the rain, the birds, good food, good music, his family and friends," she said.

"My dad brought home some flat-cars and several hundred feet of track from a brickyard that went out of business," said Rob. "He set up a train track in the front yard, and I think my friends used to come over



Lambert appears in a 1930 Dallas newspaper clipping. The caption reads, 'Bobby Lambert, 13, of Columbus, S.C., has built his own robot ... which answers commands.'

just to see my dad. We had carnivals to benefit Muscular Dystrophy, and the train ride was the main attraction. Daddy's excuse was that he did all this for the kids, but we knew it was really for him.

"He was a great playmate."

## Rights

► Continued from page 15

extension to the university library, allowing free, temporary access to a collection of audio recordings. To underscore this fact, the system is called LAMP, for "Library Access to Music Project." As a result, it even permits legitimate access to music from artists who have not allowed even legal music download sites to carry their work (like the Beatles or Madonna).

Although part of LAMP's advantageous licensing results from the service's provider university status, the project's developers feel that at least partial benefit of the system's low and legitimate cost structure could be enjoyed by any cable system. This was part of the project's initial concept, for which the university received partial funding from Microsoft.

MIT obtained the music used on the LAMP service from a Seattle-based company called Loudeye, which licenses published music in digital form through arrangements with major music publishers. One of Loudeye's services is the preloading of music files to hard-disk automation systems for radio stations, which is how the music was delivered to MIT, at a cost to the project of \$30k.

### Will it last?

Some observers expected a quick challenge to the system from the record industry, likely to be based on the grounds that LAMP should not be eligible for such licensing exemptions

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**Mentor:** Journalism teacher Fred Marlo

**Learning Experiences:** playing keyboards in bad rock bands in the 1960s, getting fired from several radio stations

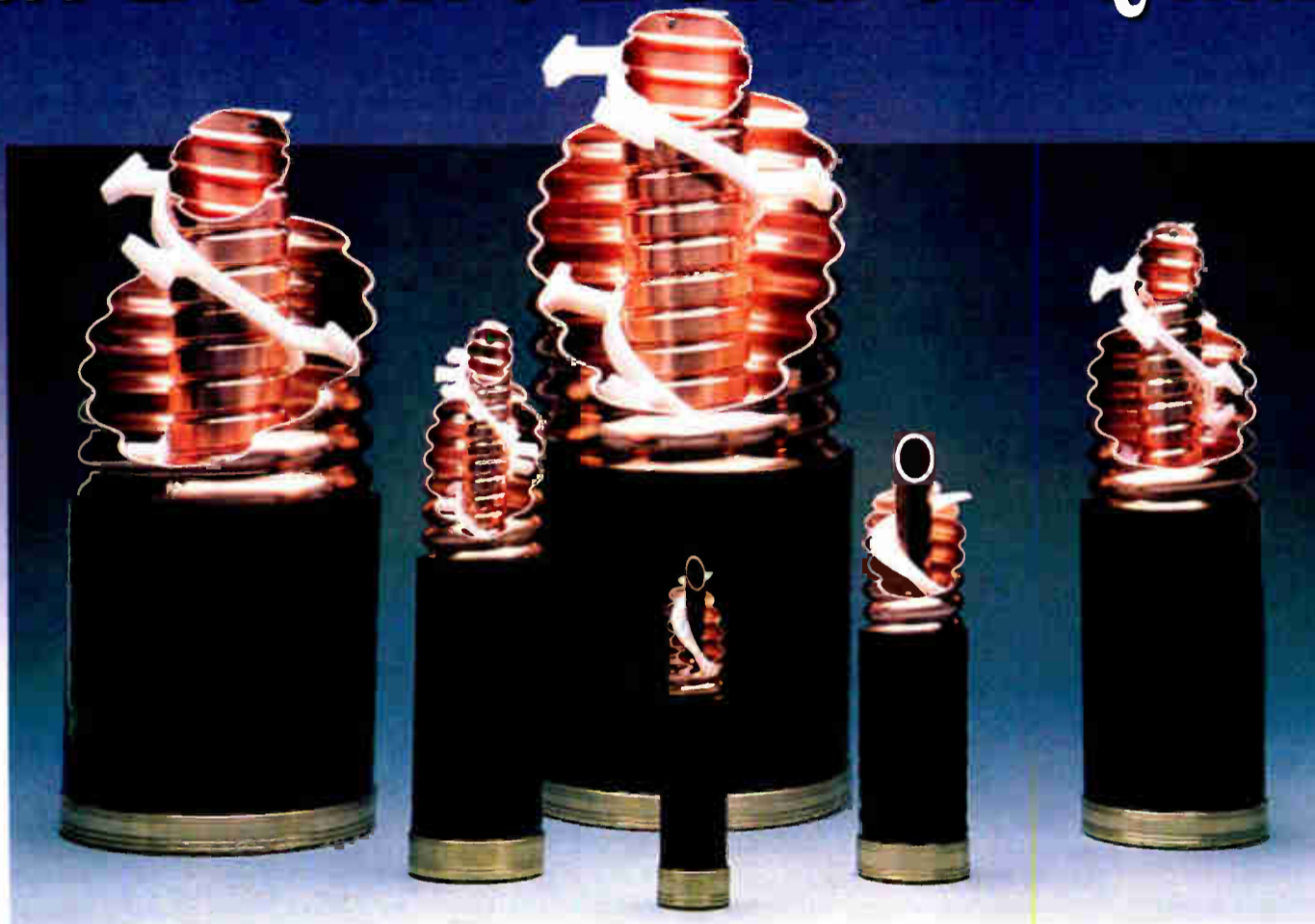
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# RDS Gets Its Groove Back

by Tom Vernon

The resurrection of RDS continues to gain momentum, following a flurry of activities in the fall and recent product announcements by manufacturers. The RBDS subcommittee of the NRSC, which had been dormant for several years, was reactivated at the fall NAB Radio Show.

New RDS gear was displayed there and other products are under development.

Allen Hartle, CEO of The Radio Experience, said his company is responding to the need to make RDS installations easier for chief engineers.

"At many sites, just getting the RDS data from the studio to transmitter site can be a logistical nightmare," Hartle said. Stations often have to cobble together links with a combination of short-haul modems, RS-422 connections and interfaces to STL transmitter and receiver data ports. For large sites where each station has its own RDS data feed, the problems become even more difficult.

The Radio Experience recently released a dynamic data processor allowing up to six RDS signals to be combined at the studio site and sent to the transmitter over one STL data channel or TCP connection. The signals are split at the transmitter into separate RS-232 feeds for RDS encoders.

"We expect to be introducing more RDS hardware at NAB next spring,"

Hartle said.

Other suppliers focus on ways to generate a revenue stream with RDS.

Stratos Audio has unveiled an interactive advertising system developed in partnership with Motorola and Hyundai Autonet. The system features one-button purchase capability and can be used for electronic purchasing of CDs and other items being advertised by the station. "Now playing" data is obtained from a station's automation system and routed to the StratosAudio database.



Clear Channel is using Audemat-Aztec FMB 80 dynamic RDS generators in 192 of its stations to display 'now playing' information, traffic alerts, call letters and other information.

It is packaged in the appropriate format and returned to the station for use on the station's RDS subcarrier and Web site or e-commerce and m-commerce applications. Stratos is testing the system in conjunction with WSNI, a Clear Channel station in Philadelphia.

StratosAudio CEO Kelly Christensen described the development of interactive radio as a three-phase process. The first phase is where the technology is today, the second involves promotions via the Web and wireless devices along with

real-time usage reporting and e-commerce. The third phase involves embedded interactive wireless devices enabling instant Web and wireless e-commerce.

DMarc Networks touts another money-making use for RDS: personalized radio messages. Listeners can go to dMarc's *radiogreetings.com* Web site and pay to enter a text message that will be displayed on select major-market stations at a date and time of their choosing. DMarc recently announced a partnership to deploy its dRDS system on 53 Clear

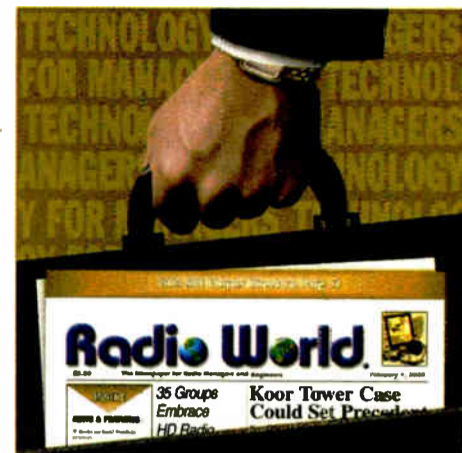
Channel stations in southern California.

The company also offers DMarc Web Manager, a desktop program that enables stations to change the RDS text message by daypart, manage available inventory and handle reporting and billing.

### Listeners respond

The largest deployment of RDS gear in the United States to date was announced recently by Clear Channel, which expected to have equipment installed in 192 of its FM stations in the top 50 markets by the end of November.

Clear Channel selected the Audemat-Aztec FMB 80, a dynamic RDS genera-



### TECHNOLOGY FOR MANAGERS

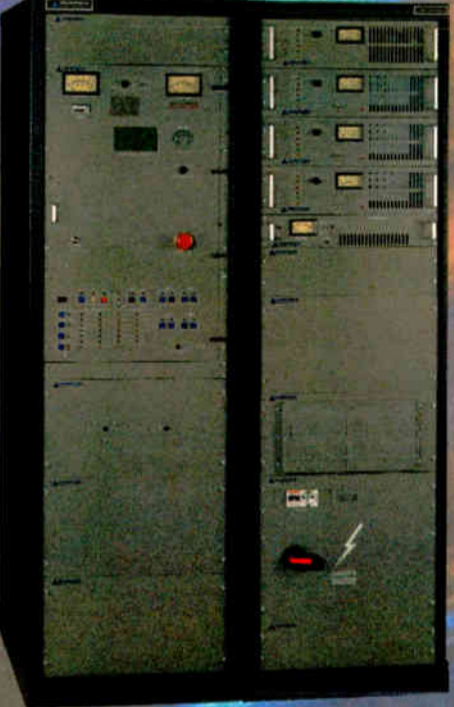
we give them one more reason to listen longer, and that's where the real payback will be realized."

Another potential revenue stream for broadcasters is the Data Radio Channel or DARC, a 76 kHz FM subcarrier that can send data at 16 kbps. DARC can be used to send text, pictures or Flash video and audio files originating from Web sites or servers. DARC can be used in conjunction with RDS, for longer text messages, traffic management systems, real-time information services and electronic billboards. Tests for several high-speed subcarrier applications using DARC are underway.

One concern for cash-strapped broadcasters is investing in a technology that is relatively future-proof. Most developers of RDS services stress that great pains have been taken to ensure that their data-casting systems will work both with today's analog technology and tomorrow's Ibiqity deployments.

While RDS has been well-deployed throughout Europe, interest in the United States waned shortly after its introduction

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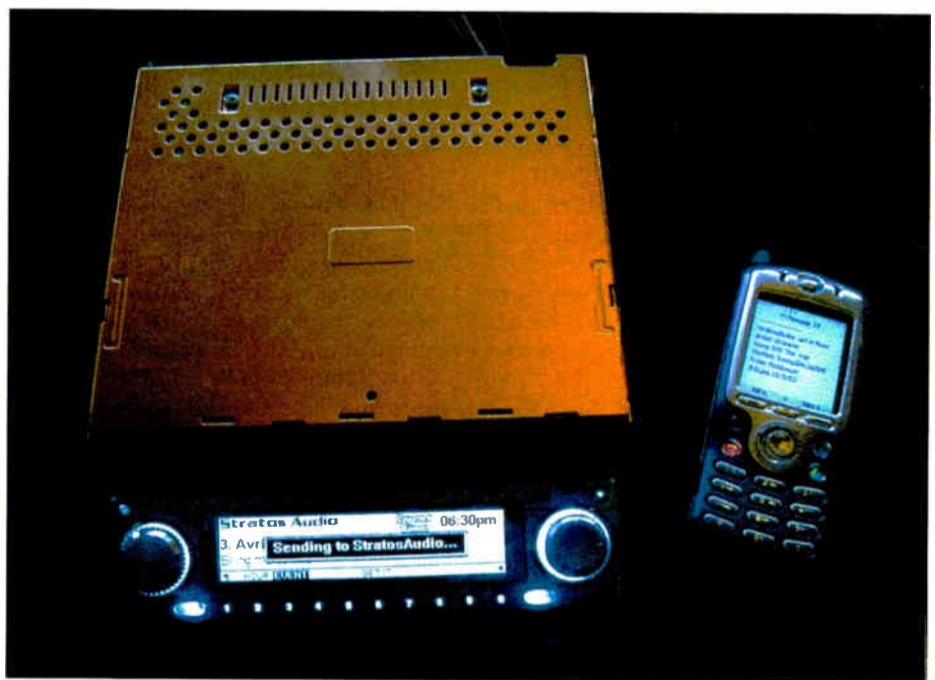
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Stratos Audio is emphasizing one-button electronic purchasing of CDs and other items being advertised by the station.

tor with TCP/IP connectivity, for use in its stations, and will use the technology to display "now playing" information, as well as traffic alerts, station call letters and other information.

The group's director of engineering, Jeff Littlejohn, said the move isn't entirely about making money.

"There may be some future revenues related to this project, but our real reason for implementing the service was so that we could fulfill the needs of our listeners. We have received hundreds of calls from listeners thanking us for implementing RDS. By serving our customers better,

about a decade ago. Several factors seem to be favoring the renewed interest in the technology. Over 75 percent of new cars have receivers with RDS capability. public awareness has been raised by the inclusion of digital displays in XM and Sirius satellite receivers, broadcasters are anxious to develop new revenue streams and promotions opportunities and a few entrepreneurs are developing ways of making money with RDS technology.

Tom Vernon is a multimedia consultant working in Philadelphia. E-mail him at [tlvernon@blazenet.net](mailto:tlvernon@blazenet.net) or call (717) 367-5595.

# Nested Rights? The IP Wars Rage on

*Digital Media Are Causing Substantial Revision in The Field of Intellectual Property Law Worldwide*

by Skip Pizzi

We're all familiar with the thinking that technology changes faster than regulation these days, but it's uncommon that the fundamental principles of an entire area of law are so substantially challenged as is the field of intellectual property, or IP at present. While this may seem troubling to some, like IP owners, it is exhilarating to others, like practitioners of IP law.

In most cases, understanding the latest, subtle nuances in interpretation is about as exciting as it gets in the legal and regulatory businesses. Today, however, the entire underpinnings of a large segment of intellectual property law are under debate. Legal amendment on such a broad scale is extremely unusual, as nothing short of a revolution takes place in this arena.

**A**t the root of this change is the loss of unilateral control of distribution channels by traditional publishers.

Radio delivery and audio content certainly are among the players in this space, so the revisions being contemplated may have significant effect on these businesses. In fact, the music business has been a catalyst of this process, and audio distribution has become the exemplar for all of digital media as it establishes its brave new marketplace.

**Publishing redefined**

At the root of this change is the loss of unilateral control of distribution channels by traditional publishers, including broadcasters. Personal computers and the Internet have provided the consumer with broad new powers, as home receivers acquire the ability to become (re)transmitters. This broadly and cheaply available capacity has changed the nature of publishing forever.

Just as Alvin Toffler forecast in the 1970s, the "prosumer" movement has taken hold, and the consumer has become a producer. But in ways that Toffler did not quite envision, the Internet has further allowed the consumer to become a publisher of media content, as well (the "pubsumer," perhaps?).

Of course, economies of scale and the power of marketing budgets still prevail, so traditional publishers still retain major market share, but the dike of exclusivity has been breached, and there are not enough fingers to plug the leaks. (No, I'm not going to make a "digital" pun

here — I'll leave that to you.)

Among the most heated debates is the issue of "fair use." This legal doctrine has been widely misapplied, but it remains an important tenet of U.S. law. At its root, it allows citizens to copy and use small portions of a copyrighted work without being subject to licensing requirements. Examples include an academic paper quoting from a book, or a movie review incorporating a clip from the film.

Many have extended this to include personal copies of legitimately obtained

content, such as making a cassette copy of a CD for use in a vehicle. While this is not technically covered by the original fair use doctrine, it has become a generally accepted part of the media environment, and most digital rights discussions today allow the concept of a unrestricted use of legitimately obtained content throughout a consumer's "household" or "domain."

The exact definition of this domain remains unsettled, however. For example, does it include mobile, portable and handheld devices that can travel outside the home? How about a second/vacation home? And can multiple copies exist simultaneously? How about serial copies (copies of copies, which digital technolo-

gies allow in much greater proliferation than analog systems could)?

These and other related questions are being asked around the world as a new paradigm takes shape in media distribution.

Probably the most notorious recent discussion on this subject in the U.S. broadcast space involves the so-called "Broadcast Flag" (officially, the Redistribution Control Descriptor) in the ATSC digital TV system.

A recent FCC R&O authorized use of this small bit of data in the ATSC signal to alert future DTV reception, recording and display equipment to the fact that the rights holders of certain broadcast did not want this content to be redistributed via the Internet. Broadcasters can turn the flag on or off at any time during a broadcast.

When it is on, future consumer

See PIZZI, page 20 ▶



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## ROOTS OF RADIO

# Radio Treasures Find a New Home

by Ken R.

Guglielmo Marconi likely never imagined developments such as satellite radio, HD Radio, station automation or Britney Spears.

But the pioneering inventor would be proud to see that his work and that of others has been lovingly preserved and made available to the public. Many of these relics of broadcasting's past are part of The Gray History of Wireless Museum, which is getting a new home soon.

"We are relocating to the Bethany, Ohio, Voice of America Relay Station, which was built in 1943 and dedicated in 1944," said William Strangfeld, president of the board of trustees. "We will still be a separate, tax-exempt corporation, though."

The VOA facility was decommissioned and the antenna structures were demolished in 1997.

## Start here, get there

The museum now resides in the Crosley Telecommunications Center in Cincinnati, home to public stations WCET(TV) and WGUC(FM). It has been there since the 1970, when Jack Gray moved his private collection of gear into that building.

"Back then, this radio equipment we have on display was easy to find, but now it is considered rare and expensive," said Strangfeld. "After Mr. Gray's death, the collection was gifted to our nonprofit corporation. And people continue to contribute ham radios, home broadcast materials, big transmit-

ting tubes, field transmitters and other archival material."

The new location was built by the Crosley Broadcasting Corp. during World War II and included six 200,000-watt shortwave transmitters and 24 highly

park and museum with sports fields and room for other public events.

## Crosley who?

Powel Crosley, after whom Crosley Corp. was named, was an early broad-



From left: Leonard Gray, son of the founder of the Gray Museum; Joe Philips, Section Manager ARRL; Clyde Haehnle, former VP Engineering, Avco Broadcasting Corp.; Bill Zerkle, Parks & Recreation Director, West Chester Township; and Bill Strangfeld, President Gray Museum.

directional antennas. When that was closed down, ownership of the building and more than 300 acres of surrounding land were given to West Chester Township, north of Cincinnati. The township is redeveloping the site as a public

caster and radio set manufacturer in the Cincinnati area. His WLW(AM) signed on in March, 1922 and many pieces of his original equipment are housed in the museum. In 1945, AVCO purchased his company.

Clyde Haehnle has been retired since 1976, but his last job was vice president of radio engineering for AVCO Broadcasting in Cincinnati. He helped build the VOA and WLW transmitters and is a board member of the museum.

"I was a close friend of Jack Gray," said Haehnle. "Gray was the supervisor of VOA and was an engineer, too. He started his collection in his garage and began adding Atwater Kent radios, test equipment, old tubes, iconoscopes, transmitter gear and old microphones. The 'software,' i.e. transcriptions and other documents, went to Media Heritage, another nonprofit organization that will also be in the VOA facility."

## Money matters

It takes a lot of funds to create the new home of the museum, but this is an all-volunteer operation with no substantial budget.

"We have a few donors," said Haehnle, "but we're trying to raise some additional money. Our display cases have been donated, and those cost several hundred dollars each. West Chester County has picked up some of the cost and one of the prisoners in the West Chester jail is painting the walls on a volunteer basis. It's an on-going project."

Strangfeld said that while the museum's public opening is still 12 to 18 months away, tours can be arranged upon request and periodic open houses are held.

Those interested in volunteering or donating broadcast or communications items or memorabilia can contact him at (513) 948-1071 or via e-mail to [bstrang@iac.net](mailto:bstrang@iac.net).

Ken R. is a frequent writer for *Radio World* and a bit of a radio antique himself.

## Pizzi

► Continued from page 19

equipment will be required to behave in such a way that allows unrestricted use within the user's household, including home network distribution, but does not allow it on the Internet. The actual mechanism for effectuating this blockage is still to be determined, but DTV broadcasts now will include a method of signaling such a prohibition — despite many critics' comments that the FCC lacked sufficient jurisdiction to issue such an order, or that the process would never work effectively.

## Change ahead

Another significant governmental reaction to the digital age is a proposal from the Federal Trade Commission to make changes to the U.S. patent law and process. Here again, laws that have remained virtually unchanged for decades are being primed for renovation.

The FTC's recently issued report outlines 10 recommendations for improving the current U.S. patent process, but even before these changes are enacted, the Patent Office is changing its approach, spurred by a number of celebrated recent cases.

In other countries, similar amendment is contemplated, or in some cases, already enacted. For example, the United Kingdom recently made some significant changes to its copyright law. An indication or even more substantial transformation in copyright law on a global scale is a proposed international broadcasting treaty at the World Intellectual Property

Organization that, after more than five years in discussion, may finally be moving to the drafting stage in 2004. This treaty would update the broadcasting provisions of a number of longstanding international agreements, most notably the Berne Convention for the Protection of Literary and Artistic Works.

Among its many interesting possible changes is the concept of "nested" rights for broadcasts, similar to the way a song's composer rights are maintained "inside" a recording's performance rights. The treaty might add one or more new layers of rights for broadcast "signals" of various types, which would envelop both the composer and performance rights of any music aired, and extend to a range of different distribution types from there.

In all cases, the downstream right holder licenses the upstream work and adds value to it with its own intellectual property, thus creating a new work. The downstream entity only holds rights to the outermost layer of the nest. Thus a broadcaster would hold rights to the transmitted signal, which could contain one or more layers of licensed IP from other entities. A cable or Internet retransmission of the broadcast would add a layer on top of that, and so on. Although potentially complex, this treaty could turn the current crazy quilt of media IPR into a streamlined and comprehensive modern rights framework.

Over the next several years, these and many other changes will rock the world of intellectual property. This will create an unprecedented level of upheaval in a normally sedate environment, which is always fun to watch.

## MARKETPLACE

Products for the Radio Broadcast Professional  
Mail info and photos to: RW Marketplace, P.O. Box 1214, Falls Church, VA 22041

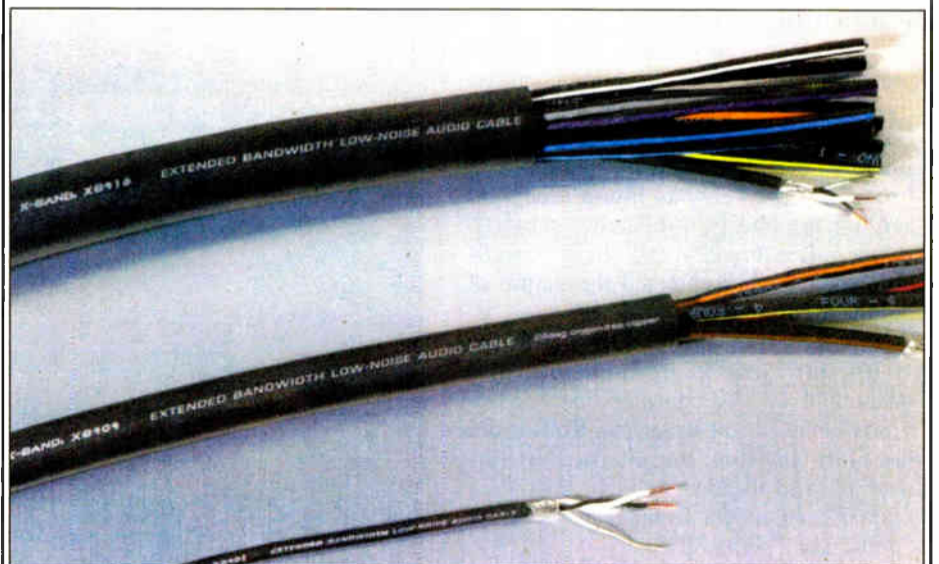
### Gepco Has X-Band Cable

Gepco is promoting a line of X-Band analog audio cable.

The cable is available in single, 4-, 8-, 12- and 16-pair versions. The bal-

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TECH TIPS

# If You Can't Stand the Heat ...

by Stephen Rutherford

Engineers contend with heat all year long. Summertime is the hardest on transmitters sites. When only outside

being circulated by the intake airflow. See Fig. 1.

## Wrap it

The solution is simple. Use insulat-

ing wrap on the exhaust ductwork to reduce thermal radiation. For this site, a mylarised bubble wrap was used. This provided an R factor of 7 and was used for its simplicity and ease of

can be applied successfully.

Remember that there are two types of powered hot air exhaust systems, blade and squirrel-cage blower designs.

If your site is using a squirrel-cage type of exhaust system to remove the hot exhaust from the transmitter, leave an air gap of 6 to 8 inches between the top of the transmitter and the bottom edge of the exhaust hood. If the exhaust fan stops, the hot exhaust air will flow out

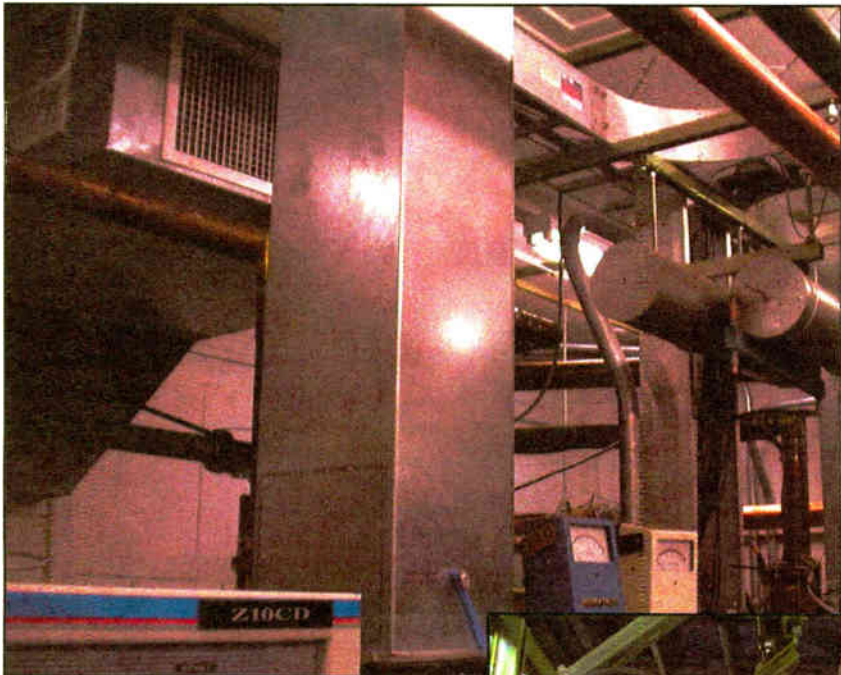


Fig. 1: Transmitter No. 1 is shown before wrapping the exhaust stack

air is used for the equipment cooling, any source of radiated heat in the space will increase the room temperature.

This transmitter site used only outside air for total cooling for multiple transmitters and the inlet air was blowing across the sheet metal ductwork of a dual Continental 816-R3C. The stack temperature for these 22,000-watt units was in the range of 160 degrees Fahrenheit. When outside air temperatures exceeded 90 degrees, the interior temperature would exceed 100 degrees. Additional room heat was radiating from the sheet metal ducts and was



Fig. 2: Transmitter No. 2, after wrapping the exhaust stack.



Fig. 3: Plate Voltage and Plate Current Meter Covers

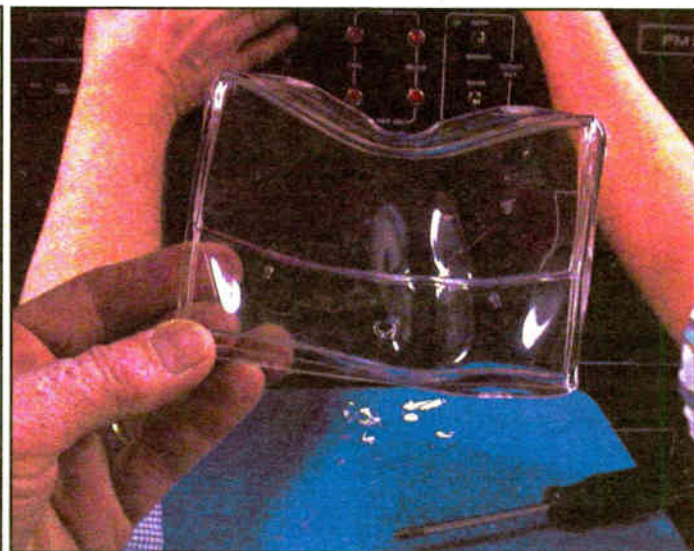


Fig. 4: RF Output Meter Cover

## Control Solutions

### Model RFC-1/B Remote Facilities Controller

- control transmitter from any telephone
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- programmable control by date and time
- optional printer and modem adapters
- programmable telemetry alarms
- integrated rack panel



### Model RAK-1 Intelligent Rack Adapter

- parallel printer interface
- internal modem for data transfer
- front panel status indicators
- battery backed power supply
- rack mountable chassis
- accessory package for RFC-1/B



installation. Insulating bubble wrap typically is available from large lumberyards or from HVAC supply houses. Foil-backed fiberglass insulation can also be used for this job with a higher R factor.

Use a duct tape that will not degrade with heat. Start by wrapping the insulating wrap around the ductwork starting closest to the transmitter and working up. Overlap the horizontal and vertical seams by about 3 inches for the best thermal seal. If there is a heat bypass vent on the ductwork, make a flap that will allow the vent to be opened when it's needed. See Fig. 2.

Avoid using foil-backed foam-type insulating board for site safety. In the event of a fire, this material could contribute to the spread and intensity. Consult with your fire insurance carrier for their advice and recommendation.

In this installation, the room temperature was reduced about 8 degrees. This may not seem like a large reduction, but the important fact that the filament seal temperature also is reduced proportionately to the reduction in the air inlet temperature. Reducing the filament seal helps the tube to last longer; everything runs that much cooler.

Temperature control of the transmitter space has numerous solutions that

and around the hood. The space may get very warm, but the transmitter will keep working.

Without the air gap, the backpressure will not allow sufficient airflow to cool the transmitter, which will lead to dangerous operating temperatures.

The exhaust duct for this Harris FM-25K transmitter was attached directly to the transmitter cabinet. When the exhaust blower was lost, the meter faces melted out. See Figs. 3 and 4. At a later time, the high voltage lead, at the front of the final amplifier cabinet, arced and shorted to ground. This failure was occurred because the insulation melted out of the cable during the above situation.

The point is, when you experience any kind of a system failure that has a great impact on the entire unit, such as excessive heating, open as many of the spaces as possible and inspect everything you can touch and see.

The off-air time and risk of greater damage to the transmitter could have been avoided. You will see and touch more future failures using the process of "laying on of the hands and eyes."

The author is Stephen Rutherford of Rutherford Resources Contract Services and Engineering in Portland, Ore. E-mail him at sprutherford.bunny@comcast.net.

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## A Big 55 for Classic99

KFUO(FM), St. Louis' only station with a classical music and arts format, is celebrating its 55th anniversary.

The independently owned station was founded in 1948 and shared daytime programming by simulcasting with its sister station, KFUA(AM). Programming consisted of classical music, arts information and religious programs.

The FM began broadcasting in 1964 the Saturday afternoon live performances of the Metropolitan Opera that continue to air today. It operated as a full-time, listener-supported classical music station from 1974 to 1983. After beginning operations as a commercial radio station in 1983, KFUA adopted Classic99 as its public identity.

Daily broadcasts feature renowned classic composers, orchestras and performers, and specialty programming such as "Classic Kids" for children on Saturday mornings. KFUA touts its dedication in supporting the arts through interviews with arts organizations' representa-

tives and announcements about events or performances.

Classic99 also sponsors a program, "Educational Initiatives," that provides underprivileged children with access to classical music through classroom teaching, music lessons and performance opportunities with the station. The NAB honored Classic99 with the Marconi Award for Classical Music Station of the Year, (appropriately enough, in 1999).

Director of Broadcast Operations Dennis Stortz touts the station's relationship with its owner, the Lutheran Church-Missouri Synod, and the community's respect and financial support as its secret to avoiding conglomeration for 55 years.

For more information, visit [www.classic99.com](http://www.classic99.com).



Classic99 Middy Host John Roberts

## RIZ Signs Deal for U.S. Distribution

You can expect to hear more about the RIZ brand of transmitters. The company, based in Croatia, signed RJB Broadcast Corp in Oviedo, Fla., as its U.S. broadcast dealer pending FCC approval of the gear.



RIZ 10 kW MW Transmitter

The company was founded in 1948. Its product line includes FM, short-wave, medium-wave and long-wave devices as well as antennas, remote control and related gear.

RJB's product line includes radio and TV antennas, amplifiers, consoles and hybrids, microwave links, remote controls, transmitters and satellite gear. Other companies in its line include DB Elettronica, Digital One, Econco, IMP Telekom, Italiana Ponti Radio, Listec Video and Red Sierra Networks.

For information call RJB in Florida at (800) 870-9233 or visit [www.rjb-broadcast.com](http://www.rjb-broadcast.com).

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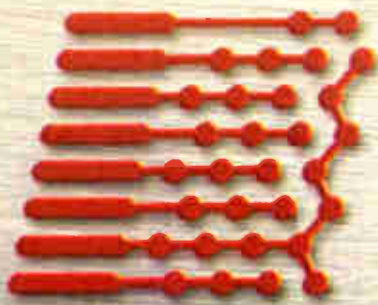




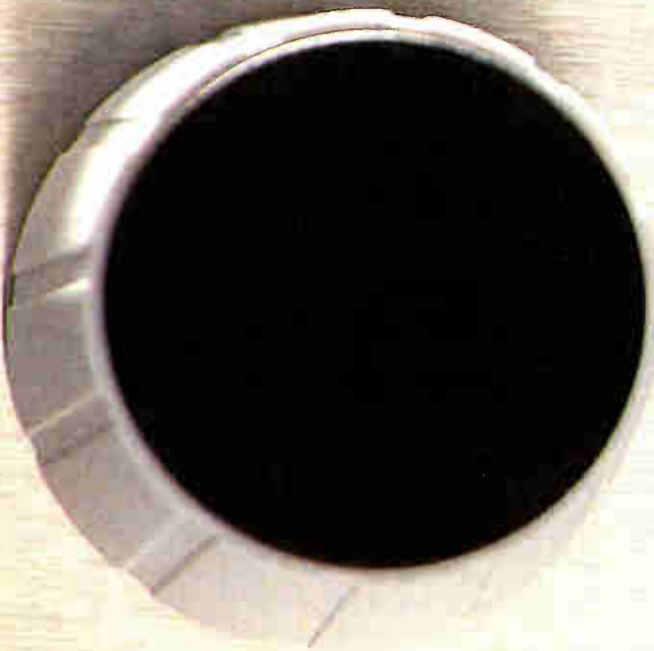


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## Did He Just Say That on the Radio?

*The FCC Seems Ready to Tolerate Certain Language Once Considered Unacceptable*

by Harry Cole

The FCC's indecency policy has taken a dramatic turn, first suggested in a decision in mid-2002 and most recently reinforced, in spades, in early October.

Lock the doors and get the kids away from the radios; for the time being, the commission appears prepared to tolerate the broadcast of certain language once considered unacceptable for broadcast.

that still reverberates through First Amendment and broadcast law, the Supreme Court held that the policy did *not* violate the First Amendment.

(Personal aside: Team Cole's Law participated in the briefing at the Supremes on behalf of Pacifica. While we remain morose and despondent that we lost, acquaintances have consoled us with the observation that it's probably not everybody who could convince four members of the Supreme Court

During their on-air discussions they repeatedly expressed the desire to "piss on" various teams, players and the league commissioner. They apparently also said, on the air, that it was okay to use the term "prick" (and particularly the phrase "sawed-off little prick").

A complaint was filed, and lo and behold, the commission concluded that the term "prick" (and its more specific variant, "sawed-off little prick") did not constitute indecency. The FCC bought the licensee's argument that those terms were used merely as a "vulgar insult," and not as anything describing or depicting sexual or excretory etc., etc.

Similarly, the FCC concluded that the term "piss on" (or its variants, "pissed at" and "pissed off") are "clearly not indecent" because they are merely "slang terms indicating of describing a sense of anger." And even when the FCC acknowledged that the morning team occasionally used the term "piss on" in connection with some urinal splashguards bearing the NHL logo which they had distributed to local bars and restaurants, the commission still found that that use was "not so graphic or explicit" as to constitute indecency.

Now fast forward to the January 2003 Golden Globe Awards, televised nationwide. Bono, lead singer for U-2, steps to the microphone and expresses his contentment in no uncertain terms: "This is really, really f\*\*\*ing brilliant," and then "This is f\*\*\*ing great." The remarks are broadcast. In roll the complaints, all 234 of them.

And in response, the commission sticks to the path it had started down in the Buffalo case. According to the FCC's October decision, Bono "used the term 'f\*\*\*ing' as an adjective or expletive to emphasize an exclamation." (All you grammarians out there may beg to differ because Bono used the term not as an adjective, but as an *adverb*, to modify the adjectives "brilliant" and "great," but you get the point.) As far as the commission was concerned, "offensive language used as an insult rather than as a description of sexual or excretory activity or organs is not within the scope" of the indecency policy. The commission also noted that "fleeting and isolated remarks of this nature do not warrant commission action."

What's the take-home message here? It appears to us that the commission may, at long last, have come to understand the point that Carlin was making in his monologue.

Words are simply words. They're sounds to which we attach a variety of meanings. And while some words may be associated in some peoples' minds with bad or offensive notions, the fact is that those very same words may also be associated with a wide variety of benign notions, and may frequently be used in just such non-offensive contexts by a wide range of people.

So what should stations do in light of these developments?

See #%\* \$!!!, page 28 ►

### BOOK REVIEW

## Aw ... Relax, Archie! Re-Laxx!

by Read G. Burgan

I confess I am a shameless fan of Old-Time Radio. Although I was not born during radio's prime in the late 1930s to the mid '40s, I was old enough to catch its remaining years in the late '40s and '50s.



Harlan Stone (Jughead),  
Bob Hastings (Archie),  
Gloria Mann (Veronica)

None of us who listened had an inkling that it would disappear almost overnight. If you weren't there, you can't understand how different the radio of today is from the Golden Age of Radio.

Unfortunately, most actors, writers and directors of that period are dead. Each year fewer of them attend the handful of OTR conventions held around the country.

Fortunately there is one way to preserve the remaining OTR people, or at least their memories. And that is through accounts like the delightful book "Aw ... Relax, Archie! Re-laxx!" by Harlan Stone, who prefers just plain "Hal."

Who is Hal Stone? In his adult life he produced TV commercials and documentaries. During his youth, he was a radio actor. He provides a firsthand account of what it was like in his book.

His most famous role was that of Jughead on the "Archie Andrews Show" beginning in 1944 and continuing, with some interruptions, until 1953. When he auditioned for the role at age 13, he had no idea that it would continue through his early 20s, with time off for a stint in the Air National Guard during the Korean War.

Stone, now 72, provides a firsthand account of life as a child actor. Over the past several years, Stone has shared his memories as a radio actor with those of us who subscribe to the Internet "Old-time

See ARCHIE, page 28 ►

## The commission may, at long last, have come to understand the point George Carlin was making in his monologue.

Before addressing the most recent developments, let's take a quick look at the history of indecency regulation.

### Carlin's Big Seven

For the last 30 years or so, the FCC has prohibited the broadcast of "indecent" matter in keeping with a standard first set down in the mid-1970s. The ban currently applies between 6 a.m. and 10 p.m. Under the standard, the commission defines "indecent" matter to be "language or material that, in context, depicts or describes, in terms patently offensive as measured by contemporary community standards for the broadcast medium, sexual or excretory activities or organs."

A popular misconception is that the FCC has ever singled out certain words as plainly indecent and never acceptable on the air. The notion presumably arises from the, er, seminal case in the area, which involved the broadcast of a George Carlin monologue titled "Filthy Words."

In that monologue, Carlin opined that there were seven particular words that, in his view, you couldn't say on the air. He spent about 10 minutes exploring those words, repeating them over and over in various contexts. They are so famous you can probably rattle them off. If you don't know them and want to, just do an Internet search under the words "Carlin" and "seven."

A station in New York City broadcast the Carlin monologue one afternoon in 1973, a complaint was filed by an accidental listener, and the rest is history. In response to the complaint, the FCC devised the first version of its current indecency policy and held that the broadcast of the Carlin monologue violated that policy.

The station appealed and convinced the U.S. Court of Appeals in D.C. that the commission's policy violated the First Amendment. Then, in a landmark decision

that it's constitutional to say "c\*\*\*sucker" on the radio.)

Because Carlin had focused on seven particular words, and since many folks probably never bothered to read the full text of the Supreme Court decision, the myth arose that the FCC had attached some special regulatory significance to those seven words, and that it was therefore very, very important to avoid using any of them on the air. As it turns out, though, the FCC did *not* single those seven words out for special attention.

To the contrary, as the definition spelled out above indicates, "indecency" encompassed *any* language or material depicts or describes sexual or excretory organs or activities in a patently offensive manner.

### It's in the context

So what, you say?

Well, if you happened to listen to the original Carlin monologue, or if you just listen to conversations around you in many public places, you should realize that all seven of the Carlin words can be, and often are, used in contexts that have nothing to do with sexual or excretory organs or activities. And if they don't have anything to do with such organs/activities, their use should not technically be deemed to be "indecent" for the FCC's regulatory purposes.

While that is a sound logical analysis, few broadcasters historically have been willing to roll the dice and permit their on-air staff to let loose with any of the seven words regardless of the context.

But that is likely to change in view of the recent decisions.

In June of 2002, the shift started with a decision involving certain comments made by a morning team on WGR(AM) in Buffalo, N.Y. The announcers apparently had a preternatural interest in hockey, and harbored particularly strong feelings, not necessarily favorable, toward the NHL.

# Archie

► Continued from page 27

Radio Digest," and in his book he displays the same delightful sense of humor that has characterized his postings.

Interestingly enough, it was the "OTR Digest" that provided the impetus for Stone to write his book.

"When I got talked into subscribing to the digest, I was in the process of writing a book about my 25-year TV directorial career. In the digest, people started asking me all sort of questions about my radio experiences, and when a few found out I was writing a book about TV, they suggested I include my prior radio performing experiences in it.

"I couldn't do that. The TV book was going to be irreverent and a sort of exposé. I

didn't feel irreverent about my old-time radio experiences. It would have required two different approaches. Due to the encouragement, I shelved the TV book temporarily, switched gears and wrote 'Aw! Relax Archie...Relaxx!' I wrote it to primarily entertain and enlighten."

This book is a fun read, the kind of thing that you will enjoy taking to the beach or reading in a hammock or in bed late at night. He shares his early experiences as a child model and how that led at age 8 to a role in the touring company production of "Life With Father." It starred Lillian Gish, who treated the child actor as her surrogate son and referred to him as her Baby Harlan.

He takes us on a delightful romp of Chicago and New York in the 1940s as experienced by a young man who performed with some of the greatest actors of the era including Ross Martin, William Conrad, Art

Carney, Ed Begley, Robert Montgomery, Ethel Merman and many others.

Stone is generous in giving credit where credit is due and provides lots of information on his fellow radio actors and, where possible, details what became of them after the death of Old-Time Radio.

He shares intimate anecdotal behind-the-scenes accounts of what it was like to work in radio. His career included many famous network shows including "The Theatre Guild On The Air," "Let's Pretend," "The Ethel Merman Show," "The Henry Morgan Show," "Dr. Christian," "Big Town" and "Death Valley Days."

Stone provides insights into what rehearsals were like, descriptions of the various kinds of directors, his relationships with other child actors and how he balanced a career in radio with the responsibilities and desires of a "normal" teenager.

## Demands on time

What was it like being a child actor?

"In my early youth, I would sometimes resent it because it might occasionally interfere with my play time. But I certainly got lots of perks, met nice people and had many interesting experiences. Later on in life, I realized how fortunate I was to have a career like that practically handed to me.

"I appreciated the fact the nine years of the Archie show carried me through the awkward teenage years, and all those experiences and contacts prepped me for my eventual success as an adult in the production end of TV."

Ironically, after concluding a career in TV production, Stone finds himself once again in OTR, this time at various regional conventions.

**Title:** "Aw, Relax Archie ... Re-Laxx"

**Publisher:** Bygone Days Press

**Content:** 336 pages. 240 illustrations & photographs

**Cost:** \$30 including shipping

**Info:** [www.by-gone-days.com/jugbook.php](http://www.by-gone-days.com/jugbook.php)

## #%\*\$!!!

► Continued from page 27

Obviously, some caution is still probably advisable. While these decisions suggest that the commission is prepared to tolerate on-air language that might have been thought completely unacceptable even a couple of years ago, it is important not to underestimate the FCC's ability to change its mind in the face of public outcry.

So if on-air patter suddenly consists of nothing but "dirty" words, and if an influential segment of the public starts complaining big time, we would not be surprised to see this newly-articulated policy shrivel up pronto.

Social mores may be changing, but many people remain squeamish about such language, which is why The Man at Radio World requires us to evade certain words in our column, even now.

Another personal note comes to mind. During the oral argument before the Supreme Court in the Pacifica case — a case in which the focal point was a monologue stressing seven particular words — none of those words was ever articulated.

When the first lawyer to argue that day stood up and introduced himself, Chief Justice Burger stopped him and said, "We are familiar with the facts of the case and you may proceed directly to your argument," which everybody in the courtroom took to mean, "I don't want you to say any of those dirty words in my court."

And sure enough, the argument went on for about 90 minutes, as I recall, without anybody saying any of the seven. And when the court's decision was finally written, it too did not include any of the words.

The court got around that by including a transcript of the monologue as an addendum to the opinion.

— Harry Cole



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# E-Mail Addiction: How to Get Help

by Mark Lapidus

"I feel like e-mail has become my number-one job," I overheard one promotion director tell another. "You got that right," the other replied.

I asked the promotion directors what they'd do if I took their e-mail away from them. I tried to clarify my brash statement by saying they'd still have jobs, they just wouldn't have e-mail. They relaxed somewhat and gave me blank stares. Yikes!

Has e-mail so overrun us that it's become our number-one priority? Before you laugh this off as just another reality of work life, take the time to think about better ways to use e-mail so that it works for you, instead of you working for it.

## IMHO

If you're like most people in radio, your e-mail in-box sits open all day, with you glancing every few minutes to see if something important is coming to you that requires immediate attention. Stop!

Just as you probably don't answer the phone every time it rings (if you're lucky, you have caller ID), you shouldn't be jumping on your e-mail the moment it comes to you.

When you pounce on every single e-mail sent to you from your co-workers, vendors or friends, you are allowing the method of communication to dictate your priorities. If you wouldn't allow a phone call to interrupt your schedule or someone to pop into a meeting you were holding at your desk, you shouldn't allow an e-mail to throw you off course either. Yet it's typical. You'll be meeting with someone, you hear their e-mail sound go off and what do they do? Do they ignore it and keep talking with you? Only if you're a very important person or you're talking to a highly evolved individual. Programmers and promotion/marketing people typically are task-oriented, so when you're dealing with this type, don't take it personally. However, if you see

yourself in this description, read on; you need help.

How do you unplug yourself from this unhealthy situation? True e-mail addicts — and believe me, I was once one — have to turn the e-mail program off entirely, as in closing out the application that says "You've Got Mail" or putting that little icon in your tray that will tantalize you to open it. This doesn't mean you don't check your e-mail. It only means you're going to check it several times a day and deal with it then.

Set up three times a day to check e-mail that work well around the rest of

ers and sisters, take the leap and delete. When your in-box has 400 e-mails in it, you're not finding anything anyway. If you feel you need a record of a specific e-mail, you can always print it out, or store on a drive or floppy disc.

## LOL

E-mail works best when used for brief communication — statement of facts, basic questions and basic answers — all answered at the convenience of the recipient. E-mail does not work well for communicating emotion or nuance. Because it's so easy to misunderstand

## Promo Power



by Mark Lapidus

wrong way. If you haven't ticked off somebody yet by sending a venom-filled piece of electronic trash, consider yourself lucky.

Another common complaint about e-mail I hear from folks in our biz is that senders rarely check the size of files before sending them. When you send a sound file, say, a 5 meg file to someone who happens to have dial-up connection, or a very slow shared ISDN, you will not make a friend. On a few occasions, users who have sent out 5 meg files to an entire cluster have crashed the system. Oops! \_

Gotta go, I've got an in-box to check. Heck, it's been nearly three hours since I've looked and I can't wait.

The author is president of Lapidus Media. E-mail him at [marklapidus@yahoo.com](mailto:marklapidus@yahoo.com).

## Just as you don't answer the phone every time it rings, you shouldn't be jumping on your e-mail the moment it comes to you.

your daily schedule. For most people, this means viewing e-mail first thing in the morning, once in the mid-day and, finally, before leaving the office. When you check e-mail three times a day, this allows you to get back to any of your peeps on a timely basis (yes, even your boss).

To stick to your three-times-a-day routine, you've got to evolve into an e-mail organized individual, a higher plane of awareness. You've got to have a system. You shouldn't be using your in-box as gigantic task bulletin board, reacting to various subject lines to keep you on track. Instead, read an e-mail, respond and file in a side-box (available in many e-mail programs; you create folders with names on them). After you've read the e-mail, delete it.

"I can't ... do that ... must not delete," I hear you crying out! Yes, broth-

what someone else is saying in writing, e-mail is a poor tool for critiquing any kind of performance, especially on-air performances.

People often will take an e-mail the

## Savage Grabs Sirius Airtime

Wrestler Macho Man Randy Savage gets a chokehold on Sirius jock "Good Time" Marcus during a visit to the New York studios this fall.

The entertainer was promoting his debut CD "Be a Man" and his voiceover work for Disney's "Tarzan II" movie project.



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# SMS Offers Radio New Options

by Jason Ford

SMS — short message service — is causing an international stir. Every hour, several million SMS messages are sent globally: from teenagers planning their weekend to investors receiving the latest stock information to voting for a reality television program.

SMS messages can even be used in some places to buy a drink from a vending machine.

What was originally intended as a simple voicemail notification service has become a lot more.

"A lot of consumers today are averse to having phone conversations, drafting long e-mails or writing letters. SMS is a short, sweet communication medium conveying accurate messages blending in with the informal and to the point communication culture of today," said Craig Barrack, U.K. country manager for Netsize, a Paris-based company specializing in SMS-based solutions for business and consumers.

## Text revolution

At the forefront of this "text revolution" are young people, many of whom use SMS to organize their social and love lives.

Many businesses use SMS to keep in touch with customers and to alert them to special promotions. In particular, media and entertainment companies are using it to deliver value-added services to its consumers at premium rates.

"SMS is a marketing medium that provides direct feedback from the consumers and helps measure the effectiveness of traditional advertising," said Barrack. "Consumers prefer to participate in SMS marketing campaigns as they are innovative, interactive and have an element of fun involved such as winning a competi-

tion or a prize."

What opportunities are there for radio, one of the oldest forms of wireless, to combine with the latest wireless technology in providing their listeners with a unique experience?

One can look at the dramatic results television has had over the past year in combining programming with viewer interaction via SMS.

For example, the worldwide reality television program "BigBrother" relies on viewer interactivity to evict housemates. In the United Kingdom, "BigBrother 3" saw more than 6 million text messages sent to the program, half of which were eviction votes. The rest were for value-added services.

In Australia the "BigBrother" value-added services, charged at a premium rate, included weekly updates via SMS, opportunities to download ringtones and logos.

People with multimedia messaging service capabilities were able to receive a snapshot from the live Webcam, an image that could be used as a wallpaper on their MMS handset and the clip of the week.

Many television programs now use SMS to interact with the viewer, inviting them to nominate their "man of the match" in a rugby game, asking them to choose their favorite music video or to poll opinions during a breakfast program.

Television, which has traditionally been a passive medium, has become interactive, and the mobile phone has found a place alongside the remote control.

## Audience communication

"TV programs are normally associated with high production costs and expensive airtime. In contrast, radio is a much more flexible channel of communication that can integrate interactive SMS based communication with its audience," said

See SMS, page 32 ▶

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# SMS

► Continued from page 30  
Barrack.

"As radio shows are even more interactive and immediate, SMS is good means of running polls, inviting opinion, song requests, etc. Advertisers can integrate SMS with their campaigns. For example, a local car dealer advertising on a local radio station can as listeners to text into the advertised mobile number if they wanted to test drive the latest model of a car he is promoting," Barrack said.

The other advantage radio has over television is its relationship with listeners.

"The relationship radio has with its listeners is quite unique, because it is the closest relationship you can have, as people feel a part of 'It,'" said Graham Knowles, marketing director for BoomerangBack.

BoomerangBack offers the BoomerangBack for Broadcast product, which allows radio stations to manage SMS traffic and to provide listeners with SMS services. The product has been in development for four years and is being used in this country as well as Australia and the United Kingdom.

Announcers are able to interact with listeners in real time, sending them a response not dissimilar to e-mail, which the listener receives as a text message.

"People change their physical and e-mail addresses, but one thing they are not changing is their mobile phone number, so now we have the opportunity to connect to that individual through their mobile," Knowles said.

Not only announcers benefit from the database that builds with each new interaction. The database can become a research tool, allowing sales and marketing to target their campaigns better.

"The unique thing is every time a listener interacts with us, we capture that significant attribute in the database, so if they responded to a competition to win a holiday, then we know they like competitions," Knowles said.

Through SMS, radio stations can reach their audience in a targeted and personal way — be it birthday greetings or sponsored information, such as ski reports or news on demand, which are value-added services for both the listener and the advertiser.

Knowles said he sees radio stations

format," said Abigail Taylor, interactive services manager for Chrysalis Radio.

"Members subscribe with their age and postcode to start with, and we regularly ask them for demographic profile information in return for prizes, etc., to build on this," she said. "As this is actual information (give or take a few text spelling mis-

taking part, and I think this is due to the SMS nature of things, as they are offered prizes over and above what they can win on air that are sent directly to the individual and thus makes it very personal to them."

"If the request was sent by text message," Barrack said, "the radio station can acknowledge receipt of the request and send back a message confirming that their song request will be aired at a particular time/program. This would motivate the listener to tune in again during the day when his/her request is being played encouraging loyalty towards the radio station."

SMS text clubs have generated a new revenue source for sales teams to add value to their overall radio sell, Taylor said.

"The highly targeted nature of the profile information on the clubs is great for advertisers as there is no wastage and gives the sales team a more accountable channel to pull in new business which may not have previously bought radio airtime such as direct marketing."

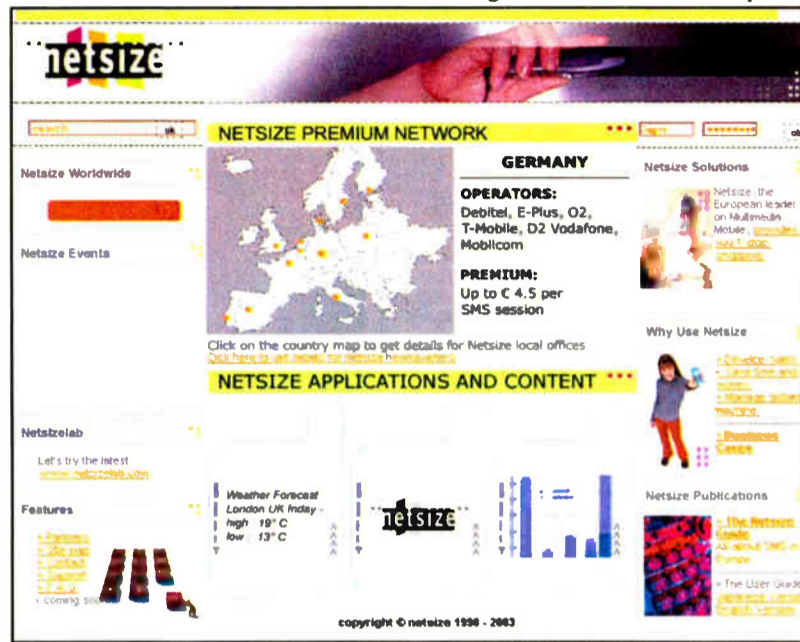
With listener loyalty comes responsibility when it comes to sending SMS messages to listeners.

To a large extent, mobile telephones have been a "no go" zone for marketers, unlike e-mail, the home phone and the home mailbox.

"The privacy rules and guidelines for SMS around the world are becoming very clear. You cannot market stuff to someone unless you have permission to do so," Knowles said.

"We would never send any more than one message every two weeks to the text clubs as it can be intrusive due to the personal nature of SMS, but if people can sign up for daily alerts," said Taylor. "The only advertising we include in SMS messages is promotional, so the audience does not mind as they are being offered the chance to win prizes thanks to the advertiser."

For information about BoomerangBack, based in Australia, visit [www.boomerang-back.com](http://www.boomerang-back.com). For information from Netsize in France, go to [www.netsize.com](http://www.netsize.com).



Web Site of Netsize

gaining great benefits both financially and a loyal listenership through "text clubs."

Text clubs have proved a success for Chrysalis Radio in the United Kingdom. The group has introduced text-based loyalty clubs for its Heart and Galaxy radio brands.

The Galaxy Network Text Maniac club has registered some 50,000 unique mobile numbers, while the Heart Texters Club exceeds 15,000 users.

Chrysalis Radio text clubs are competition-based, with listeners texting in to enter a competition and then subscribing to get additional competitions or subscribing from marketing information.

"They are sent regular competitions to their phone on behalf of the stations and in conjunction with commercial third-parties and are offered discounts, vouchers and station information within the competition

takes) it is a great source of research information; and by tracking the prizes and the responses we get to them, we can make assumptions on the type of activities that are going to enjoy most and keep them listening for longer."

Various SMS promotions Chrysalis Radio has run let listeners text in to register for a competition or automatically send club members a "you win" message or send a code to be used on-air later on that day.

## Better response

"The response is far better as the messages are all received rather than there only being 14 telephone lines into the studio," Taylor said.

Taylor reported a big response to these competitions. "We regularly get between 15 percent and 30 percent of members

## STATION SERVICES

### Monitoring Company Will Target Noncom Plays

Mediaguide has launched a subsidiary, Frequency Media. It describes the offshoot as "the first company fully dedicated to providing accurate, electronically-monitored non-commercial radio products." Joe Wallace was named CEO.

It will provide real-time online access to airplay reports on non-commercial radio music formats including Americana, classical, jazz and triple A, among others. The parent company is a joint venture between ASCAP and YES Networks.

"According to the NAB, there are over 2,000 non-commercial radio stations in the U.S., including more than 1,000 college radio stations," a company spokesman stated. "Historically, non-commercial radio has been tracked only by album, using manual and incomplete data gathering techniques. Frequency Media will benefit from Mediaguide's extensive monitoring network, which currently monitors more than 2,200 radio stations in the United States."

For information contact the company in Pennsylvania at (610) 560-4119 or visit [www.frequencymedia.com](http://www.frequencymedia.com).

### Motor Sports Radio Network Moves Distribution to Web

The primary distribution of Motor Sports Radio Network programs "Race-Talk" and "Radio-Road-Test" has migrated to the Web.

PK Communications Co. offers the syndicated programming on a primary barter basis to commercial English-language stations. "Race-Talk" is a five-minute weekly program about auto racing; "Radio-Road-Test" is a five-minute program of driving impressions of cars and light trucks.

Paul Kaminski is the company president and news director, and a freelance contributor to Radio World.

"With the increasing rollout of broadband Internet access, it made sense to distribute our programs from a

clickable link on our Web site," he said. Affiliates can visit the Web site and select links to obtain the programs.

"We can now offer special programs from the Web site upon request thanks to this pull distribution model."

The site is [msrpk.com](http://msrpk.com).

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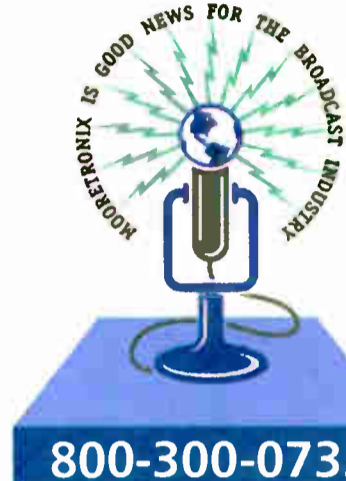
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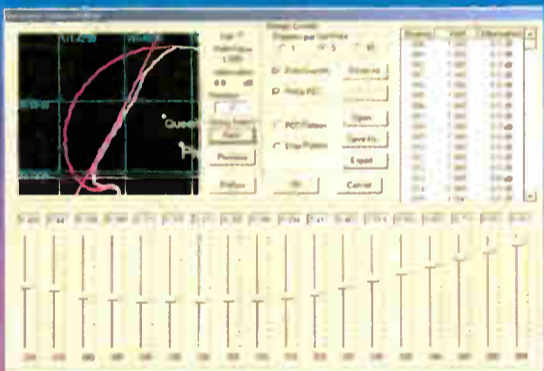
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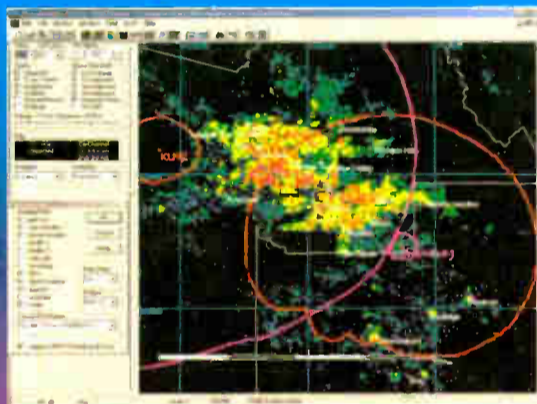
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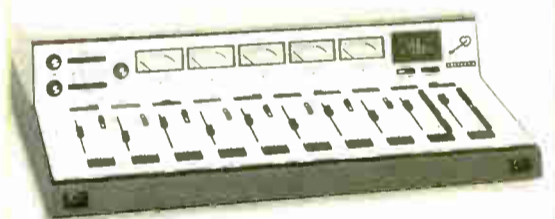
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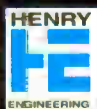
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# Fritts on Broadcast Deregulation

The following are excerpts of comments by NAB President/CEO Edward O. Fritts at Temple University in late October in a speech on "Broadcast Deregulation: Negative or Positive?"

I'm often asked: Was NAB for or against the new FCC rules? The answer is: Both. We supported changes that afforded broadcasters the ability to better serve local audiences. We opposed those that did not.

The FCC decision involved six different rulings rolled into one omnibus package. It was complex and controversial, and provoked more public reaction than any FCC decision that I can ever recall. ...

## More choice

I disagree with our friends in the activist community who instinctively oppose deregulation. But I also part company with our friends in network television who believe there should be no limits on how large they can grow, or how many TV stations they can control.

First let me address the premise that any modest change in media ownership rules represents a threat to American democracy. That's the claim of some deregulation critics, and I respectfully disagree.

Critics of deregulation base their opposition on a notion that strict Washington regulation of our business seemingly leads to better programming. Media activists harken wistfully back to a "Golden Era of Broadcasting."

I'm not sure exactly when that era was. But presumably they are referring to a time when the FCC barred companies from acquiring more than seven TV, seven AM and seven FM radio stations.

I would ask, respectfully, just how golden were the "good old days"? Back then, most Americans received, at most, a daily dose of a half-hour of local television news followed by a half-hour of national news from Walter Cronkite or Huntley & Brinkley.

Contrast that with today, where in most markets there are multiple television stations airing at least three to six hours of local and national news on a daily basis.

And how about radio? Today, many cities have one or two stations airing news and talk 24 hours a day. There are all-sports stations, all-business stations, stations that air all country music, all oldies, all alternative rock, all hip-hop, all classical, all jazz and all religion.

The number of foreign language radio stations has soared. Six years ago, there were 400 Spanish language radio stations across America; today, there are 650. Fifteen years ago in Washington, D.C., there was one foreign language station. Today, there are 12.



FILE PHOTO © NAB

The vast amount of program diversity on today's radio dial simply did not exist in "the good old days." Moreover, that diversity did not occur because of government mandates. It happened because of marketplace considerations.

Ten years ago, 60 percent of radio stations were losing money. That, my friends, translates into trouble if you are trying to improve service to listeners. When Congress deregulated radio ownership rules in 1996, lawmakers understood that profitable broadcasters were better able to serve communities than those that were losing money. Diversified formats began to appear, and community interest programming has flourished.

My point is this: Deregulatory relief granted over the last 20 years has resulted in more program options for consumers, and better public service, too.

## Special situation

In the early 1960s, an FCC chairman made headlines by lamenting a so-called "vast wasteland" of television. I never bought into that claim. But even if it were true 40 years ago, that has been eclipsed today by an era of astounding choice and diversity in broadcasting.

And to me, there's no question that modest deregulation of ownership rules

played a big role in the diverse programming choices now available.

That is not to suggest regulators should abandon all broadcast ownership rules. NAB has never advocated total deregulation. We realize broadcasting is a special kind of business, with unique responsibilities to serve communities.

In local markets, we recognize governmental restrictions on the number of radio stations a single entity can own.

We also strongly favor a rule barring a single broadcaster from owning television stations that reach more than 35 percent of U.S. homes. In our view, the 35 percent TV cap has been good for localism and diversity. It has helped preserve the delicate network/affiliate relationship.

Now some have asked: How can NAB support a national ownership cap in television, but not in radio? The answer is simple: radio and television are entirely distinct mediums. Moreover, there are 1,300 commercial TV stations, compared to 13,000 radio stations.

The bottom line is this: The U.S. system of free, local broadcasting is the finest communications system on the planet. It is a model being emulated the world over, and that's why it is critically important that media ownership rules in the U.S. reflect the realities of the marketplace.

I'm also optimistic about our future. Local radio and television stations are on a path to digital broadcasting that will usher in an era of unparalleled opportunity. ...

## Flexible approach

I close tonight with a final thought about localism and the value of broadcasting. Eight years ago, a group of broadcasters in the Dallas-Ft. Worth area got together after the abduction and murder of a 9-year-old girl and asked themselves: How can we make a difference? How can we — local broadcasters — do our part to help make sure this tragedy will never happen again in our community?

They didn't seek a government handout, and they didn't need a new regulation. From that meeting came the seeds for a voluntary proposal known as the AMBER Plan, which is named after Amber Hagerman, the young murder victim. Broadcasters all across America embraced this initiative. Working with local law enforcement, the AMBER Plan was launched, and broadcasters have helped in the recovery of more than 100 kidnapped children.

I've testified at a congressional hearing next to a recovered AMBER victim, and let me tell you: You cannot put a price tag on recovering a kidnapped child.

Now I'm not saying media deregulation has helped save the lives of a hundred children. But I do know this: local stations that are financially secure have the resources to innovate. Healthy stations can do more local news, more public affairs, and more creative programming that serves the community.

Broadcasters acknowledge that we are stewards of the airwaves, and we embrace the responsibilities that come with that.

So has deregulation benefited broadcast listeners and viewers? I think the answer is yes. The challenge is striking a flexible regulatory approach that preserves localism and recognizes market reality.

# French Radio Thriving in Canada

by James Careless

For French-language broadcasters across Canada, the news is good. More Canadian francophones are tuning in.

"French language broadcasting is doing better than before," said Sylvain Lafrance, Canadian Broadcasting Corp. vice president of French Radio and New Media. "The Radio-Canada audience has climbed from 800,000 to a million nationwide. I attribute this to the quality of our programming — especially news and information — plus that fact that what we do is very different from what is being offered on private radio."

Lafrance said Radio-Canada, the francophone service of pubcaster CBC, has opened 20 new stations across the country to extend service of the Chaîne Culturelle arts and classical music network.

"Our news and information service, La Chaîne Première, is already available nationwide," he said.

## Climbing revenues

On the private/commercial side of Canadian francophone broadcasting, the news is equally good. In particular, revenues have been climbing for the big broadcast groups in Quebec: Astral Media and Corus Entertainment.

In the third quarter of 2003, overall revenues for the 24 Astral radio stations, 16 of which are in Quebec, climbed by 13 percent. In the same period, Corus Entertainment reported 6 percent radio growth. (Corus owns 50 stations nationwide; 10 of which are Quebec-based francophone stations).

"Overall, the French language market is good, but we need to gain more market share from newspapers and television," said Astral Radio President Jacques Parisien. "Fortunately, many advertisers who are tight for cash are leaving TV for radio."

The performance of francophone radio broadcasters in Canada is even more impressive when one considers the demographics of the country. Nationwide, there are slightly more than 6 million francophones in Canada.

Of these, 80 percent or more are concentrated in Québec, which is why the province is the focus for commercial francophone stations.

This said, a few francophone commercial stations can be found in Ontario and in the Maritime provinces. Francophones in other parts of Canada either rely on Radio-Canada or volunteer-run community stations for their French-language programming.

Like their anglophone counterparts, Canadian francophone broadcasters have to meet content regulations set by the Canadian Radio-Television and Telecommunications Commission. However, these regulations do not specify only how much Canadian-generated music they must play (35 percent), but also demand at least 65 percent French-language music as well.

See CANADA, page 35 ►

## WE GIVE YOU BISSET

**Name:** John Bisset

**Occupation:** Northeast regional sales manager for Dielectric Communications

**Experience:** 34 years in the industry. SBE Certification; presenter of NAB Transmitter Workshop; speaker at numerous conventions; contributor to NAB Radio Handbook

**Mentors:** Lamar Newcomb, Ray Gill, Steve Dana, John Cunningham, Charlie Wright, John Mullaney Sr. and Jr., Mitch Montgomery, Morgan Burrow, Jim Weitzman, Alan Pendleton, Morris Blum, Milford Smith, Tom Giglio, Scott Beeler.

**Favorite memories:** Early days of AM improvement; demonstrating the Splatter Monitor to the FCC with fellow Delta employee Tom Wright; development of *Workbench* into RW's most popular feature.

**Quote to live by:** "Few things are more persistent and intimidating than our fears and our worries ... especially when we face them in our own strength." — Swindoll

Radio World's pages are home to the finest writers and columnists in the industry. Like John Bisset. Just one more reason we're the newspaper for radio managers and engineers.

# Canada

► Continued from page 34

For commercial broadcasters such as Astral Radio, these rules hurt in bilingual markets like Montreal.

## Latest hits

"Like most North Americans, Canadian francophones want to hear the latest U.S. and U.K. pop hits, which happen to be in English," said Parisien. "Because of the 65-percent French-language rule, this motivates a lot of francophones to tune to English radio stations."

Ownership restrictions also bite hard on francophone broadcasters here. For instance, Astral Media recently bought 19 French language radio stations from Télémedia Communications Inc. with the approval of the CRTC. However, fearful of Astral dominating the Québec radio market, the Canadian federal Competition Bureau decreed that Astral would have to sell eight AM stations in the province.

**F**rancophone broadcasters seem to be doing remarkably well given market conditions, continued government involvement and a potential listening population not much larger than 6 million.

Abiding by this ruling, Astral signed a deal with Québecor Média, which also owns television stations, newspapers and cable TV systems in Québec. However, in July, the CRTC blocked the sale.

"Our concern for media concentration from Québecor owning so many media properties in the province of Québec was not offset by the willingness of the applicant to commit to the renewal of the AM stations, especially the one in Québec City," said CRTC spokesman Denis Carmel.

Meanwhile, in a move that will further dilute the near 50 percent share of the Québec radio market Astral now holds, the CRTC has licensed eight new stations for the province.

## Market dominance

Today, Astral Media is still trying to sell the eight AM stations, as well as CFOM(FM) in Québec City, which the CRTC said must be sold for the same

"market dominance concerns."

The CRTC position stands in contrast to the situation in Windsor, Ontario, where CHUM Radio has operated all four commercial radio stations in the city for years, with the blessing of the CRTC. Granted, the CRTC approved this monopoly to keep the four stations fiscally solvent in the face of fierce cross-border competition from stations in Detroit.

Still, when asked if CRTC refusal to let Astral retain all 19 Télémedia properties seems unfair in light of the Windsor situation, Jacques Parisien replied, "Absolutely."

This said, observers say, francophone broadcasters seem to be doing remarkably well given market conditions, continued government involvement and a potential listening population not much larger than 6 million. 🌐

## STATION SERVICES

## Ringtones For Radio

A service from RadioVoodoo turns stations into ringtone distributors. VoodooTones is an automated phone service allowing stations to sell the catchy rings and nab a piece of the domestic ringtone market.

"Ringtones are a mobile phone product, and yet they are marketed almost exclusively via the Web," stated J. Scott Hamilton, RadioVoodoo president and CEO.

"The radio audience comprises music lovers who are also typically mobile phone users — precisely the target market for ringtones. It just makes sense to give radio the necessary tools to easily distribute ringtones and other digital entertainment content via the phone to its audience."

VoodooTones is marketed by Jones Radio Networks and provided to client stations at no cost. RadioVoodoo covers all system operating costs, and net proceeds are split evenly with participating stations. The service retails at \$1.99.

Contact the company at (800) 798-5663 or visit [Radiovoodoo.com](http://Radiovoodoo.com).

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# Buyer's Guide



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Updates  
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Radio World

Antennas, STL & Transmission Support

December 17, 2003

USER REPORT

## KSTP's Phasor Walks the Catwalk

*Due to Wetlands Restrictions, Kintronic Designs 'Sectional' Phasor for Twin Cities Station*

by Robert E. Gagne  
Director of Engineering  
Hubbard Radio

**ST. PAUL, Minn.** KSTP(AM) is a 50,000-watt D, DA/N talk station serving the Twin Cities of Minneapolis and St. Paul. The station is owned and operated by Hubbard Broadcasting Inc. The station's transmitter site, on the east side of St. Paul, has been in continuous use since 1938.

A decision was made to replace the 65-year-old phasing and tuning equipment with the three-tower directional array — a stable, adjustable and modern unit.

We enlisted the services of Consulting Engineer Ron Rackley to do the RF design of the phasor, and began to search for a company that could handle the mechanical design and construction. The array itself is in a large wetlands area adjoining a small lake. Because of the wetlands designation, a road to the towers is not permitted. The only access is via a 1,000-foot "catwalk." This meant the phasor would have to be built in sections and transported to the Tower Two building over the catwalk.

Physical limitations presented by the catwalk, as well as the transmitter building door, dictated that sections could be no wider than 32 inches and no higher than 72 inches. In addition,

the company's reputation in the broadcast industry. Their proposal indicated strong attention to detail, use of quality



A 1,000-foot catwalk and cart were used to transport the Kintronic 'sectional' phasor to KSTP's Tower Two building.

each section had to be designed so that it would weigh no more than 300 pounds.

After careful analysis of several proposals, we chose **Kintronic Labs** to build the phasing equipment. We knew

components and the capacity to build custom cabinet sections that fit our unique requirements.

The phasor was constructed using nine separate cabinet sections and tested in Kintronic's factory. It was

dismantled and shipped to our transmitter site in wooden crates. The ATUs for the two other towers were shipped as assembled units, with only the capacitors requiring installation. Phasor cabinet sections were shipped with inductors and contactors in place, while capacitors were shipped separately.

### One piece at a time

A special six-wheeled cart was constructed to move the sections down the catwalk and into the building. The sections fit together and then securely bolted to one another.

Inter-cabinet tubing connections and capacitor installation were easy, due to detailed documentation provided by Kintronics. As an aid to reconstruction, the factory provided "after" test photographs to indicate exactly how the unit should go back together.

The unit was given its final tuning by Rackley and placed on the air in early July. There have been no problems with the equipment. We worked closely with factory representatives as the equipment was being built to insure all details were covered.

The length of this article is much too short to detail the features of this phasor. From the in-cabinet lighting and AC power, to the silver-plated tubing, inductors and strap, this phasor is built to satisfy the needs of KSTP well into the future. It has given KSTP's transmission system an improved level of audio quality and directional pattern optimization.

For more information, including pricing, contact Kintronic Labs in Tennessee at (423) 878-3141 or visit [www.kintronic.com](http://www.kintronic.com).

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## USER REPORT

# STL-20C Jumps Hurdles for WGUL

by Paul Mueller  
Chief Engineer  
WGUL(AM)(FM)

**PALM HARBOR, Fla.** RF studio-to-transmitter links kept coming up short for us year after year. We couldn't find a composite STL transmitter that could effectively push the signal across 10 miles and over the obstacles between WGUL(AM)'s studio in Palm Harbor and the transmitter site in Safety Harbor, Fla.

Obstructions, such as a 60-foot hill, got in the way of any STL link originating at the 80-foot tower behind our studio complex and ending at our 280-foot tower in the Florida lowlands. What we needed was an STL with a high degree of signal strength, and our only option appeared to be a terrestrial link.

I then received word that Marti was coming out with a high-powered STL transmitter. With a 20-watt power amplifier and more output power than other STL transmitters, the STL-20C composite transmitter showed promise. If it worked as advertised, the STL transmitter with receiver would be more cost-effective than the leased equalized phone lines we had been using for the studio-to-transmitter link.

**A** welcome addition to the STL-20C is an automatic changeover feature, which will come in handy for a backup STL.

However, getting an STL frequency in an already crowded band space proved to be another obstacle. Transmitting on 950 MHz horizontally polarized was out of the question, but fortunately we were able to acquire approval by our local frequency coordinator for a vertically polarized 950MHz STL. By then, it had become apparent that we would need every millivolt the STL-20C had to offer in order to overcome that 60-foot hill and any contingency plan in an RF congested area.

## Over the hill

I was no stranger to Marti equipment, having installed an RPT-2 for a remote broadcast 15 years ago, which we still use. Additionally, WGUL has four other stations in the Tampa/St. Petersburg, western Florida area, and they use the STL-10C composite transmitter and receiver. Our Citrus County stations do, as well.

When our STL-20C transmitter arrived, I cleared two rack unit spaces at the studio and proceeded to set up the unit. It took 10 minutes to bring in composite audio through a BNC connector in the back and



adjust the unit for maximum power.

I monitored setup from a bar-graph meter on the front panel, which I liked because it is a "peak hold" type that gives precision readings on forward power, reverse power, PA current and subcarrier levels. The only control new to me was a switch for synthesizer resolution, selectable in 25 kHz steps. One welcome addition to the STL-20C is an automatic

changeover feature, which will come in handy for a backup STL.

With the STL-20C installed at the studio tower and the Marti R-15C receiver installed at the receiving tower, I stood back and held my breath. Incredibly, the signal made it from the top of the transmission tower, through a lengthy transmission line, across a ravine and over that hill to the transmitter building, where it

passed through two cavities installed to protect WGUL(AM) from stray cell phone signals nearby.

I added a pre-amplifier in the circuit to give the signal an extra boost, and the STL overcame a 12-1/2dB loss in the transmission path.

The audio came out sounding better than we could have imagined. WGUL's Music of Your Life format greatly benefited from the synthesizer used in this STL. The synthesizer has a flat frequency response of up to 200 kHz, with less than 0.2 percent distortion. As a result, the reception is strong and clean, and there is a depth to the music that wasn't there before. Our CEO noticed it right away. Another obstacle overcome.

It has been a year-and-a-quarter since we installed the STL-20C and the unit continues to run 24/7.

For more information, including pricing, contact Marti Electronics in Illinois at (217) 224-9600 or visit [www.marti-electronics.com](http://www.marti-electronics.com).

## USER REPORT

# CE Samples Bext LD Series STL

by Dick Warren  
Chief Engineer  
Pacific Spanish Network

**SAN DIEGO** I recently had the pleasure of visiting with Dennis Pieri and his staff at the Bext offices to look at a new STL system called the LD Series. The pair is straightforward in its installation, setup and operation.

The chassis construction is stainless steel, and runs on the 950 MHz US STL band or anywhere between 220 and 450 MHz (if ordered that way for export). The transmitter and receiver are frequency-programmable from the front panel on any frequency in

former taps. The receiver has the same configuration.

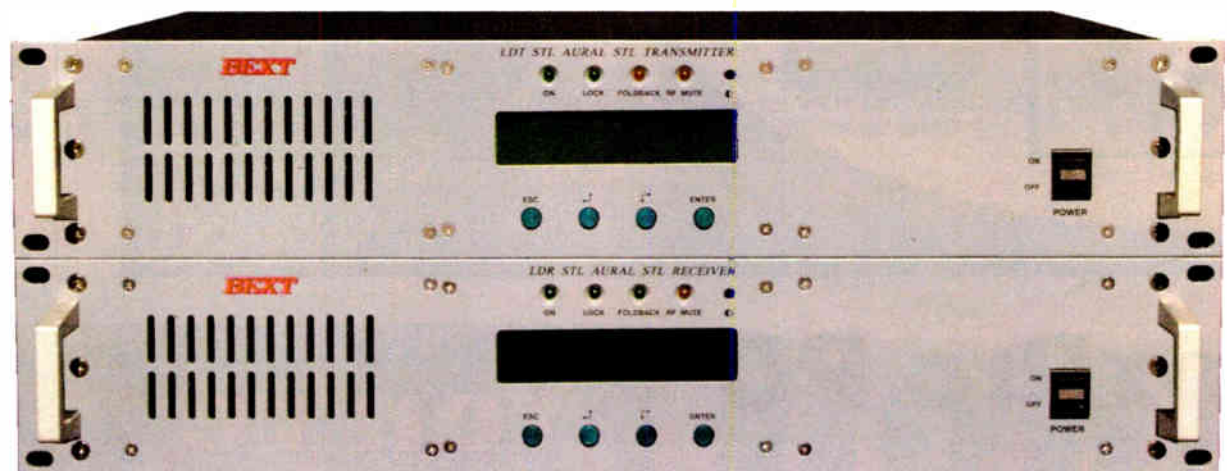
One thing I noticed, about which Dennis assured me he would ask the design engineers, is that the transmitter is fused externally, but the receiver is not. I have to remove the power supply cover from inside to get at the primary fuse.

The back plane on the transmitter has the following adjustable I/O connectors: 19 kHz pilot out, SCA 1, SCA 2, Phase Shift Control and, on the model I tested, a mode switch for mono/stereo, as well as another mode switch for pre-emphasis between 50µsec. and 75µsec. There is also an interlock BNC for remote control-

10-watt 1000 MHz slug and it showed 10.5 watts TPO. The receiver was powered up next to the transmitter, and fed by a "rubber duckie" antenna.

A 400 Hz tone was fed into the LD transmitter and monitored at 100 percent. This ran for 15 minutes while powering on and off the TX and the RX to try to get the units out of sync. They locked up every time with no distortion products noted.

The power output is controlled from the front panel or squelch control. If you have a marginal path, you can adjust the threshold down to 2 percent if you are so brave. The S/N was below -68dB in an area of San Diego with a lot of RF flying around from



The author was impressed by the LD Series STL's plug-and-play setup.

the STL band. The LD transmitter is housed in a 2U rack configuration with an LCD display on the front. Four buttons control the readings and functions of this transmitter.

On the back panel, the layout is just as clean. There are the standard N-type RF connector, XLR right and composite/left inputs, in addition to added connections from Bext. I first noticed the two binding posts. These are for 24-volt DC, allowing the user to run on power sources other than good ol' A.C. mains.

Speaking of A.C. mains, Bext came up with a great feature. Using a standard three-pin U ground socket, the unit has a universal voltage sensor, allowing the user to feed it anywhere from 85 to 255 VAC without worrying about switching the fuse holder or opening the box to switch power trans-

ling the on/off by simply grounding the center pin. It has the standard RS232 port for telemetry and a DB25 for remote metering and control.

The LD Series receiver is laid out nicely, with an LCD screen and a four-button control on the front. The back plane holds the RF input connector, the standard left/right XLRs (balanced or unbalanced) and switchable BNC MPX and SCA, RDS, RBDS outputs. It also has the 24-VDC binding posts for solar, wind or wet cell powering. This is great for a remote mountain site.

The units were powered up when I arrived to play with them. These were the first production units of the series and the manuals were still being prepared.

The transmitter was in a 100-watt dummy load through a Bird wattmeter with a

many high-rise buildings. The units can run on 0.1 watts with no degradation in audio or RF stability.

I didn't have time to take these out in the field to try an actual on-air test, and Dennis had just received this pair. He was eager to have someone come and "kick the tires," so to speak.

The pair is listed in the company's catalog, which gives details of the specs. I was impressed with the ease of the plug-and-play type setup. They also have 20- and 35-watt models available.

If you have any need to shoot RF from here to there, consider the LD series of STL from Bext.

For more information, including pricing, contact BEXT in California at (619) 239-8462 or visit [www.bext.com](http://www.bext.com).

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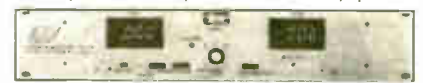
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USER REPORT

# KCLC Connects With MaxLink

by **Ralph Brancato**  
Chief Engineer  
KCLC(FM)

**ST. CHARLES, Mo.** KCLC(FM) has been reborn into a new era. Started in 1948, KCLC has been the on-campus training facility for the Communications program at Lindenwood University. An adequate facility for its day, KCLC found itself in an all-too-common situation. Much of the core equipment was operating beyond its useful life.

Fast-forward to today, when it has a new transmitter, tower site and power upgrade to 35,000 watts. The entire campus is undergoing rapid expansion to serve its students, including new dorms and teaching facilities.

This brings us to the state-of-the-art Spellman Center. It is the new home to KCLC, which is staffed by students under the guidance of long-time radio veterans General Manager Mike Wall and Station Manager Rich Reighard. The facility is equipped with two broadcast studios, a newsroom, two production rooms and one teaching lab. Logitek's NuMix digital consoles and engines are the heart of the studio.

How was I going to marry this system to our transmitter site, from which KCLC studios are just a short distance? There are no campus telco lines or fiber cables to connect the two. I wanted something cutting-edge that would do more than deliver program audio, and I didn't want a compressed STL. I wanted a bi-directional, multi-channel, uncompressed system with little to no delay.

## Card-carrying STL

Dave Kerstin at Broadcasters General Store hooked me up with Dave Chancey at Moseley. The company had recently acquired an international wireless data company and was developing a new STL based on the proven distribution system.

The answer: MaxLink. It resembles familiar STL systems and uses the standard Moseley Starlink chassis. This is the interface between you and the wireless world. Audio encoder and decoder cards feature digital and analog I/O, plus RS-232 connectivity to extend your remote control system end-to-end. A T1 transmission card replaces the standard 950MHz modulator and RF amp.

Once it was out of the box, I connected the T1 card to the MaxLink A-B Mux box, which makes the system work. I set it on top of the Starlink chassis. The A-B Mux resembles a low-profile network hub and converts T1 data to ATM for ethernet connectivity to the combo radio/antenna.

The radio antenna is about the size and weight of your local phone book. It comes standard with a mounting bracket, a 5.7 GHz "subscriber" unit that commercial IPs use to provide high-speed wireless Internet. At KCLC, it was bolted to the top of the roof skirt where it cannot be seen from the ground.

Here's the easy part. We just ran shielded, U/V-rated category five cable up to the roof and terminated both ends to the RJ-45s using the standard T568B wiring scheme. Grounding was a snap. The weather grommet for the radio antenna cable connection is actually conductive rubber, so before termination we



Ralph Brancato and KCLC's MaxLink Wireless STL

exposed and folded the shield back over the cable and pushed it through the grommet.

It's a system for the real world, and it works. I have two audio encoder cards at the studio. I send program audio to the transmitter, and the MaxLink provides simultaneous digital and analog outputs.

I have a second redundant card that I

use to carry audio for the SCA generator. Should my program card fail, I simply move it over and sacrifice the SCA chain. Our RPU receiver is located at the transmitter site and I use the Maxlink as a backhaul, for it's a full-bandwidth, stereo, analog and digital card.

Finally, there is the remote control system. We had been using Burk's

ARC-16 with spread-spectrum antennas for control. I unplugged the connection from the remote control to the Burk radio modem and changed the cable ends to interface to the MaxLink. It worked immediately.

I was astounded at how solid the system is based on the location of the subscriber unit radios. The studio unit is 14 inches from our backup analog STL dish. The side lobes of the four-foot dish, radiating in the 950 MHz band, had no effect on the system. We had no issues with the unit at the tower being about 10 feet from the bottom bay of our FM antenna. The system has been stable and in use for almost a year.

I appreciated the installation video included on CD-ROM. It was preliminary, but short and sweet. Settings are software-driven. You'll probably never change any parameters, but you'll need to work the menu to change the monitoring sources on the front panel LED meter. Each audio card has its own set of trim-pots for level control. You'll need a jeweler's screwdriver to make the adjustments. I found that out the hard way after popping the surface mount control off the PC board with a modified "greenie."

I'm now waiting for delivery of the MaxLink network card. I can extend our LAN right over the transmitter site. Now that's cool.

For more information, contact Moseley in California at (805) 968-9621 or visit [www.moseleysb.com](http://www.moseleysb.com).

## TECH UPDATES

### Dielectric Introduces HDR Series

Dielectric says its new HDR series of interleaved analog/HD Radio FM antennas maintain increased isolation between the digital and analog sys-



Dielectric's Interleaved FM Array for HD Radio

tems, eliminating elevation and azimuthal pattern deviation between signals for simultaneous transmission. Either input can be used as emergency standby.

The design has two circularly polarized antenna arrays that are interleaved at halfway intervals on a supporting structure. Each one comprises the same number of elements and is fed by a separate transmission line connected to the appropriate transmitter. Coupling is reduced between the antenna systems by interleaving the digital left hand-polarized bays with the analog right hand-polarized bays.

Dielectric said a circulator is needed at the output of the HD Radio transmitter to absorb the coupled energy and achieve the necessary isolation. Both antennas will have the same tower geometry adjacent to them, complying with FCC and predicted pattern requirements.

The company also touts its Flexline coaxial cable as an alternative to a rigid transmission line for installations on crowded towers, broadband systems or similar environments. The cable is made from oxygen-free copper and polyethylene, uses no recycled materials and is available in various sizes. Each connector is attached using a flaring tool and gauges, which eliminates risk of connector burnout due to hot spots.

Reducers may be used to mate cables to larger or smaller size interfaces, enabling the option of using a larger cable than required to reduce attenuation. Varying sizes of EIA elbows are available for connections made without excessively tight cable bends.

For more information, including pricing, contact Dielectric in Maine at (207) 655-4555 or visit [www.dielectric.com](http://www.dielectric.com).

### PSI R-Series Enables Clear Signal

PSI's R-Series fed antenna is an FM broadcast antenna manufactured in its Ebsenburg, Pa. factory. The R-Series is made with marine brass and copper through intricate welding techniques to produce what the company calls a tight, moisture-free antenna. This style of antenna's bandwidth is suitable for stations that are looking for a digital solution, and it works well without radomes or de-icers in light or rare ice environments. Both the analog and IBOC signals are clear when using the R-series antenna, the company states.



PSI's R-series FM broadcast antennas are made with marine brass and copper.

The antenna is available for all power levels above 1 kW, and PSI says directional patterns are not a problem. The antenna can be configured for circular, vertical or horizontal propagation planes to match the user's requirements. The antenna is pressurized, including the feed point and individual bays. Antenna optimization is available for additional performance based on the tower structure.

For more information, including pricing, contact PSI at its Texas sales office at (817) 645-1700 or visit [www.psbroadcast.com](http://www.psbroadcast.com).

## ERI FM Antenna Serves Windy City

Electronics Research completed a project to rebuild the east mast of the John Hancock Center in Chicago, managed by Richland Towers. The scope of work included the design, manufacture and installation of a new support mast; it included an ERI Cogwheel Master FM antenna.

The job also required the company to install new television antennas for WCBS(TV) and WCBS(DT), and a UHF panel antenna above the ERI Master FM Antenna.

The Cogwheel Master FM Antenna was modified to a dual-input feed system to accommodate simulcast FM IBOC operations prior to leaving the ERI factory in Chandler, Ind. The antenna feed system includes separate analog and digital inputs that enable injection of the IBOC signal without using a high-loss combiner.

The system was commissioned in August and has been used as the main antenna for FM tenants operating from the John Hancock Center since completion.

For more information, including pricing,



The master antenna is visible two-thirds of the way up the left tower.

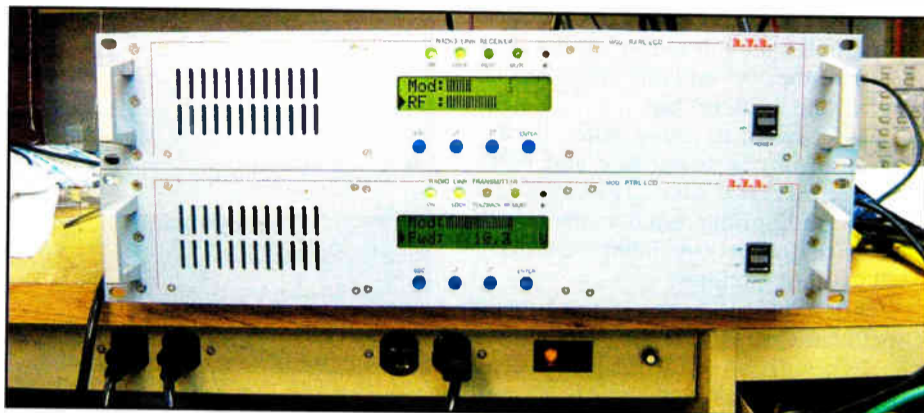
ing, contact Electronics Research Inc. in Indiana at (812) 925-6000 or visit [www.eriinc.com](http://www.eriinc.com).

## RVR Debuts Line of Digital Links

Italian radio transmission manufacturer RVR Electronica released its line of digital STLs, composed of the PTRL LCD transmitter and the RXRL LCD receiver. The links are controlled and supervised by an internal microprocessor, and come with telemetry connection for remote access and diagnostics, 24 V external power supply and automatic

voltage sensor for 110/220V.

The units can be equipped with optional internal stereo coders and decoders, which the company says give an optimal stereophonic separation by generating low harmonic distortion without sacrificing sound quality. PTRL and RXRL are capable of transmitting RDS, SCA and MPX or mono signals. The system has an LCD display that shows the power level, working frequency, exciter parameters and communications with any external units.



RVR's line of digital STL links are controlled by internal microprocessors.

## Altronic Offers Convection-Cooled Loads

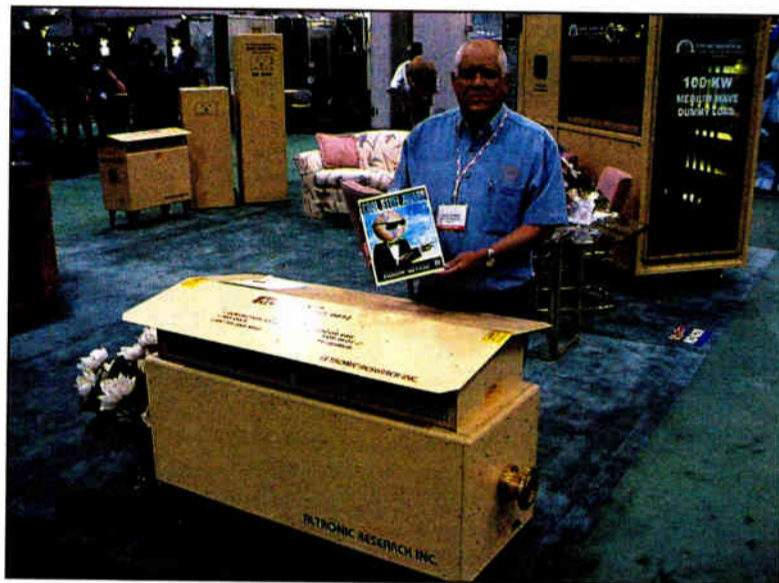
Altronic Research offers the models 6606 and 6612 convection-cooled resistor loads.

Designed to handle loads of up to 6 kW (model 6606) or 12 kW (model 6612), the new terminators can accommodate frequencies from DC to 110 MHz, and are configured to handle both analog and IBOC digital FM needs.

Requiring no AC power, the 6606 and 6612 present 50-ohm dummy loads to transmitters through either a 3-1/8-inch EIA flanged or unflanged connection, with other connectors available by special order.

The line of terminators was awarded the Radio World "Cool Stuff" Award at the NAB 2003 convention.

For more information, call the company in Arkansas at (800) 482-5623 or visit [www.altronic.com](http://www.altronic.com).



John Dyess is shown with the award-winning line of terminators.

Units are two rack units high. The links work on the standard frequencies of 220-960 MHz in 5 MHz steps.

For more information, including pricing, contact RVR USA at (305) 471-9091 or visit [www.rvusa.com](http://www.rvusa.com).

## Sabre Towers Handle Severe Climates

Sabre Site Solutions' 1200 and 1800 TLWD guyed towers handle various communication applications and loading and ice conditions. Manufactured in 10-foot sections, Sabre's small-face towers can be guyed or wall-bracketed. Self-supporting and rooftop applications are available.

Sections are hot-dip galvanized following fabrication to ensure performance in severe climates.



The 1200 TLWD is a 12-inch-face guyed tower that uses heavy tubular legs and serpentine bracing. Guyed a maximum of every 30 feet, the 1200 TLWD comes in heights up to 250 feet.

The 1800 TLWD is an 18-inch-face guyed tower that also utilizes heavy tubular legs and Sabre's serpentine bracing. Guyed approximately every 40 feet, the 1800 TLWD is for heights up to 400 feet.

Sabre's small-face towers are adaptable to a variety of heights and loading requirements. The towers are available from stock.

For more information, including pricing, contact Sabre Site Solutions at (866) 428-6937 or visit [www.sabrecom.com](http://www.sabrecom.com).

## Protel Folds Antennas

The key feature of the latest Protel antenna offering is foldability.

The antenna range, available in frequency ranges from 50 MHz to 3 GHz, is designed for those who need to perform frequent RF signal measurement operations and who waste a lot of time putting up and taking down measurement antennas.

The new range includes 10 foldable antenna models, all customizable to client specifications.

For more information, including pricing, contact Roberto Anzelmo or Tiziana Bagnesi at Protel in Italy at 011-39-02-9019225 or visit [www.protel.it](http://www.protel.it).

## CTE Lightens Dipoles

Part of a new series, the disassembled DIP 13 is a light dipole antenna from CTE International for medium-power colinear FM systems.

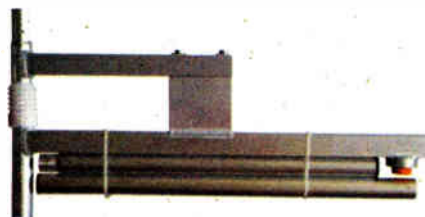
The net weight of the system — 10 pounds — and its reduced size before assembly help minimize transport costs.

The vertically polarized DIP 13, designed for the 87.5 to 108 MHz frequency range, has an impedance of 50 ohms and a power rating of 500 W to 1.5 kW. The wind load is about 40 pounds at wind speeds of 100 mph.

Internal components are silver-plated while external parts are coated with Alodine 150 aluminum.

Once assembled, the new CTE International antenna measures 55 by 33.5 by 2.36 inches. The packed DIP 13, ready for transport, measures 35.4 by 14.1 by 2.75 inches, and weighs (including packaging) 11 pounds.

For more information, including pricing, contact Yuri Casi at CTE International in Italy at 011-39-0522-509-528 or visit [www.cte.it](http://www.cte.it).





TECH UPDATE

### LBA's CoLoSite Aids Collocation

For wireless carriers and tower owners, collocation is a "hot" topic. In many locales, collocation opportunities are becoming scarce.

CoLoSite is a recent technological approach to AM collocation developed by two LBA Group companies. The system uses hardware by LBA Technology with engineering and integration systems from Lawrence Behr Associates Inc.

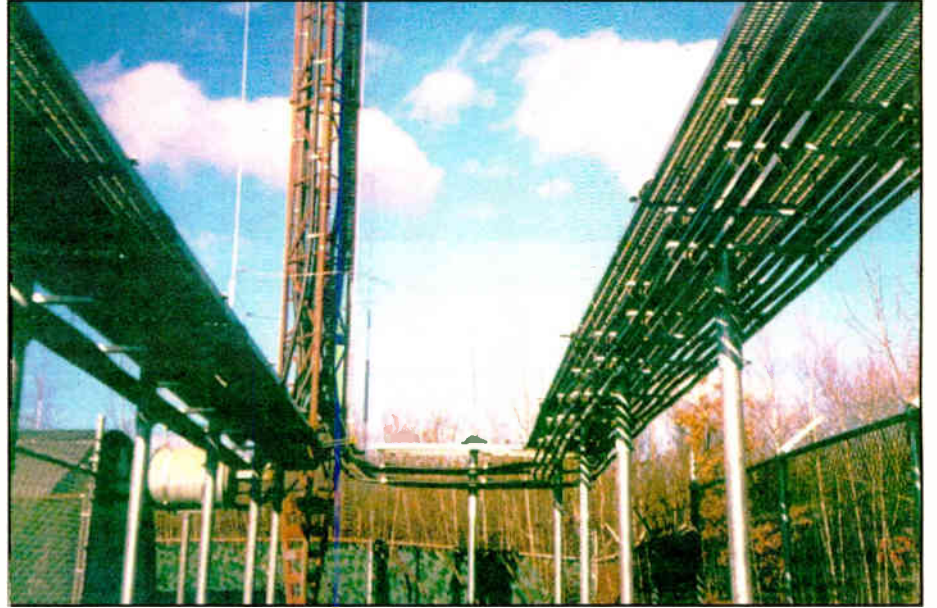
The CoLoPole isolation system typically is used on non-directional AM towers, and results in direct grounding of the AM tower. Wireless antennas and transmission lines are mounted on and bonded to the structure. The CoLoPole uses a wire cage impedance trans-

former. Lower portions of the cage are heavily insulated and spaced away from the tower to enable access to the wireless antenna system. The AM station benefits from the CoLoPole through improved efficiency, "air sound" and lightning protection, LBA states.

Directional AM stations use multiple towers to form an FCC-licensed radiation pattern to protect other stations from interference. This pattern must not be disrupted by collocation. The CoLoCoil is an isolation system between the base station equipment and the AM tower. It prevents the wireless transmission lines from affecting the operating parameters of the directional AM towers.

CoLoCoils are modular, and accommodate future wireless expansion with minimal impact on AM facilities or the carrier's compound.

For more information, including pricing, contact LBA Technology in North Carolina at (252) 757-0279 or visit [www.lbagroup.com](http://www.lbagroup.com).



Boston's WCCM(AM) uses LBA's CoLoPole, visible on the tower.

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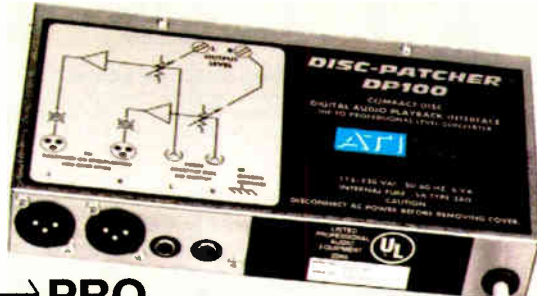
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ATI Audio Distribution Amplifier 2016-1. We have about 10 of these as a result of studio renovations. They cost over \$1,100.00 new but will let these go for \$250.00 each plus S&H. Contact Michael Raley at (704)523-5555 for more information or e-mail [Mraley@rb.org](mailto:Mraley@rb.org) for a picture.

Audio Arts 8400 Distribution Amplifier. We have about 15 of these as a result of studio renovation. They cost over \$1,100.00 new but will sell "as is" for \$250.00 each plus S&H. Contact Michael Raley at (704) 523-5555 or e-mail [Mraley@rb.org](mailto:Mraley@rb.org) for a picture.

Tascam CD 301 (Have two working units) will sell as is for \$225.00 each plus s/h. Email [Mraley@rb.org](mailto:Mraley@rb.org) for a picture or call (704) 523-5555.

Tascam Ministudio Porta One Cassette. Four mic lines for remotes This cost \$600.00 new but will sell "as is" for \$95.00 plus s/h. Call Mike Raley at (704) 523-5555 or e-mail [mraley@rb.org](mailto:mraley@rb.org) for a picture.

Two RTS 416 Distribution Amplifiers. Has slight problem pushing +4. Cost \$1,173.00 new but will take \$325.00 for each unit plus S&H. Call Michael Raley at (704) 523-5555 or e-mail [Mraley@rb.org](mailto:Mraley@rb.org) for a picture.

(2) Denon DNM 1050R pro mini-disc Rec/PB deck, has low impedance & headphone jack. Can email (2) pics & main features portion of the manual, \$570 each +shpg/handling. Mike Raley or Ron Muffley at 704-523-5555 or email: [Mraley@rb.org](mailto:Mraley@rb.org) for pics.

**Want to Buy**  
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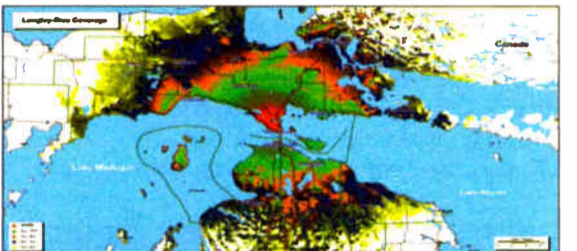
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Potomac Instruments RSA-19 remote switching adapter. Gary Wachter, Service Bdcgt, 621 NW 6<sup>th</sup> St, Grand Prairie TX 75050. garyw@k104fm.com or fax 972-558-0007.

Telos 2x12 digital talk show system for up to 12 pots phone lines, rack mount unit only, does not include telephone sets; Telos 1A2 interface. Gary Wachter, Service Bdcgt, 621 NW 6<sup>th</sup> St, Grand Prairie TX 75050. garyw@k104fm.com or fax 972-558-0007.

Marti STL-10 monaural STL system, 950-375 mHz, in excellent condition, late model with gray panels, removed from service October 2003. Roy Robinson, Lake Country Radio, POB 600, Graham TX 76450. 940-549-7800.

TFT 9100 composite STL system, 948.00 mHz, in good condition, removed from service October 2003, \$3500. Roy Robinson, Lake Country Radio, POB 600, Graham TX 76450. 940-549-7800.

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Equipment Exchange

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# READER'S FORUM

Radio World, December 17, 2003

## The Case for LPAM Community Radio

by Frederick M. Baumgartner  
Director of Engineering  
Comcast Media Center

*A government which robs Peter to pay Paul can always depend on the support of Paul.*

— George Bernard Shaw

In July, I licked the stamps and sent off a petition to the FCC. It's not the first time I've done such, and as always, I say a quick prayer that it is worth the postage.

This time, with the support of my friends and radio, I'm asking to allow community stations onto the expanded AM band frequencies, based on fairly large mileage separations and rather restricted station power and antenna efficiencies.

From a technical point of view, the request is overly conservative. Even a thousand of these 100- and 30-watt stations with their 40-foot vertical radiators could never come close to causing the interference we already accept on the AM band. The power levels and licensing process proposed make it nearly impossible to dismiss the petition on technical grounds.

Besides, I remind myself, an FCC that would consider trashing the AM and Shortwave Broadcast and Amateur services with Broadband on Power lines, to save the cost of a chunk of wire or fiber, isn't going to get hung up on nonexistent interference issues.

No, the issue (assuming the petition sees the light of day) is whether we're willing to free up an insignificant shard of unused and virtually unusable spectrum

for something other than feeding the commercial machine that is now broadcasting in America. I'm not sure that what has happened to broadcasting is entirely bad, but I am sure that a small part of the spectrum should be conserved for community broadcasting.

### If you build it, they will come

I am spoiled. Early in my professional life, I taught at a high school (carefully selected by me) with an FM station. Wedged between Chicago and Milwaukee, this little flea-powered station was the community station. It carried the ball games, the election results, the local news, the debates and the music— everything that was Burlington, Wis. Terry Havel taught there forever, and built the station from a dream.

Most of us know someone like Terry. He had every record that ever charted in his collection. He sponsored the careers of hundreds of kids who went on to work in the media, became better for learning about media or maybe just became less shy and more confident — all the while helping make Burlington one of those communities we are often nostalgic about.

I now live a thousand miles, two decades and a dozen sets of call letters away from WBSD(FM). Sitting in our little church in Elizabeth, Colo., looking over at the high school, I miss the sermon, knowing that there is nothing for this community on the stations from Denver or Colorado Springs. They are a million miles away in every real sense they can be. If they broadcast from New York or Texas, or an array of discs, and some do, it would make no difference. I'm not sure that in this day and age, there can be a real sense of community without some broadcasting outlet.

I think that I want to spend some volunteer time getting a community station on the air, coaching the students, and getting it set up to support the local events, merchants, clubs, churches and local concerns. The only thing that is missing is the authorization and some affordable and reasonable rules that make and maintain the community station as a true community station.

FM allocations are out of stock, for the entire spectrum has been sucked into Denver, 45 miles away. If there is no community public parkland in the field of broadcast spectrum, is there a way we might afford to buy a little sliver for our communities, rural and urban? In every other public endeavor, we set aside some portion of the public assets for the use of the public at large. The amateur service is a wonderful set-aside in the communications portions of the spectrum.

A true community service allocation, with a low cost of entry and an income potential barely above what it takes to keep itself afloat, is as American as can be.

Whatever we might think of the homogenization and concentration of broadcasting, the loss of community broadcasting and service is too high a price. Please Mr. Powell, allow us this barren slice, with a minimum of barriers.

Baumgartner's petition is available on several Web sites, including the Denver SBE/SMPTe site at [www.smpte-sbe48.org/oldnews/news0603.html#lpam](http://www.smpte-sbe48.org/oldnews/news0603.html#lpam).

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13. Publication Title: Radio World  
14. Issue Date for Circulation Data Below: October 03

15. Extent and Nature of Circulation  
Average No. Copies Each Issue During Preceding 12 Months  
No. Copies of Single Issue Published Nearest to Filing Date

a. Total Number of Copies (Net press run) 12270 9867  
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c. Free Distribution Outside the Mail (Carriers or other means) 199 222  
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16. Percent Paid and/or Requested Circulation (15b divided by 15g, times 100) 95.3% 97.2%

17. Signature of Publisher: [Signature]  
 Date: October 2003

18. I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including civil penalties).

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 If the publication had Periodicals authorization as a general or requester publication, this Statement of Ownership, Management, and Circulation must be published, it must be printed in any issue in October or, if the publication is not published during October, the first issue published after October.  
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 PS Form 3526, October 1999 (Reverse)

## ◆ READER'S FORUM ◆

### Back in the Day

In response to your Oct. 8 article, "You Actually Worked One of Those?": Those Eumig cart players in the picture of WPCX(FM) to which you referred are actually Ampro machines, just like the pictured console.



Reader Mike Erickson says he knows Ampro cart machines when he sees 'em, and he sees 'em at right.

I used Ampro machines at WLIM(AM) radio in the late 1990s. They were far from great machines, with strange electronics and horrible head assemblies. I remember the head was held in place by a machine screw in a vice grip-type setup. You could never get the alignment right, and they often mis-cued. I have seen RCA logos on these, but if you look closely they are indeed Ampro.

As for Eumigs, I have never heard of those — and I thought I'd heard of every cart machine.

*Mike Erickson  
North Babylon, N.Y.*

### Weathering Isabel

I was dismayed to read the article on the devastation to radio stations as a result of Isabel ("Coastal Radio Plans

for Next Isabel," Oct. 22), and see that we were omitted from the story.

Many suffered extensive damage, which is why we felt it important to provide the public with a reliable signal and information as to what was going on. I felt proud of the fact that our two stations, WBUX(FM) in Buxton and WURI(FM) in Manteo, both NPR affiliates, were able to stay on the air throughout the entire storm and afterwards, providing news and information to the people of the Outer Banks, Hatteras and Ocracoke. I also think it is commendable that some of the Norfolk and Tidewater stations much farther inland sustained the storm.

It took extra effort to provide this service, but it paid off when the people of the Outer Banks called and told us that ours was the one radio signal they could receive. We were their only source of news and information.

*John Francioni  
Chief Engineer  
WUNC(FM)  
Chapel Hill, N.C.*

### What's My Motivation?

John Gardner's article "Fight Off Satellite, Go HD-R" in the Oct. 8 issue is totally off base.

Gardner repeats the tired old line about listeners subscribing to XM and Sirius to get better audio quality. But if listeners were motivated by audio quality, they would have rejected the loudness wars and the attendant broadcasting of overprocessed garbage prevailing on the FM band. Listeners are motivated by content.

In an attempt to scare radio broadcasters into adopting IBOC, Gardner mentions that 90 percent of all television viewers now pay for television, preferring cable and satellite services to free, over-the-air TV. However, when the concept of cable was introduced in 1950s rural Pennsylvania, it was the added programming choices that made it so popular, not the promise of higher quality. Cable became more than just a way for rural viewers to get television service.

As noted in earlier RW letters, conventional AM and FM radio offer an abysmal choice of programming in these days of homogenized corporate radio.



"No, I can't exchange it."

Fans of country and adult standards are forced to buy CDs, listen to MP3 files or subscribe to XM or Sirius. Because the digital component of an IBOC station must carry the same programming that the station carries on the analog component under current FCC rules, where is the incentive to buy an IBOC receiver? If the content is unappealing, IBOC will not woo a listener back to the station.

Localized programming could help terrestrial radio stations to retain listeners. But how many stations are still live and local?

If IBOC is universally adopted, it promises to drive even more listeners to the satellites, as the bands will be trashed by interference from the broad digital sidebands of the IBOC signals. Once again, the United States, in bowing to vested interests, has adopted a seriously flawed technology that the average listener didn't ask for and probably won't want.

*Philip E. Galasso  
Independent Broadcast Engineer  
West Creek, N.J.*

### Nostra Culpa

I just received my Nov. 5 Radio World and I saw the photo that Paul McLane took of Art Constantine at the NAB Radio Show.

Love the picture, not the caption. It's a RoadStar, the portable version of the NetStar, posing with Art.

*Jill Fitzpatrick  
Musicam USA  
Holmdel, N.J.*

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Designed to integrate flawlessly with the Wheatstone BRIDGE digital audio network router, the Generation 9 control surface allows you to easily create large or small platform-based systems that are exceptionally user-friendly and flexible. Wheatstone BRIDGE network cages house all I/O ports and engine cards, and may be wired in tandems within a single equipment room or interconnected to separate remote locations by means of fiberoptic or CAT-5 cables to provide single wire studio integration schemes.

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